

BRICKYARD TOWNS
A HISTORY OF REFRACTORIES INDUSTRY COMMUNITIES
IN SOUTH-CENTRAL PENNSYLVANIA



U.S. Department
of the Interior
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America's Industrial
Heritage Project

Brickyard Towns:
A History of Refractories Industry Communities
in South-Central Pennsylvania

Kim E. Wallace

Historic American Buildings Survey/Historic American Engineering Record

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*Cover: Harbison-Walker brickyard and Ganister Hill company houses, Mt. Union Pa. Undated,
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PREFACE

The impetus for this study of refractories company towns came from America's Industrial Heritage Project (AIHP, Randy Cooley, director) an agency of the National Park Service created by an act of Congress in 1986 to commemorate and promote the industrial heritage of a nine-county (Bedford, Blair, Cambria, Fayette, Fulton, Huntingdon, Indiana, Somerset, and Westmoreland) region of southwestern Pennsylvania. (Fig. P.1) The iron and steel, coal, and railroad industries represented in the three figures of the agency's logo were identified as those most important in the region's history. Designation of an entire region as a historic site is part of the recent move to establish "heritage corridors" or "national heritage regions" with the goal of strengthening regional economies through recreational and cultural tourism.¹

The Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER, Robert Kapsch, chief) was asked by AIHP to assist with the identification, research, and interpretation of historic sites and structures within the nine counties. HABS was established as a New Deal program in 1933 to record historic buildings across the United States. It was joined in 1969 by HAER, which concentrates on engineering and industrial structures. Together they form a Division within the National Park Service devoted to the documentation of

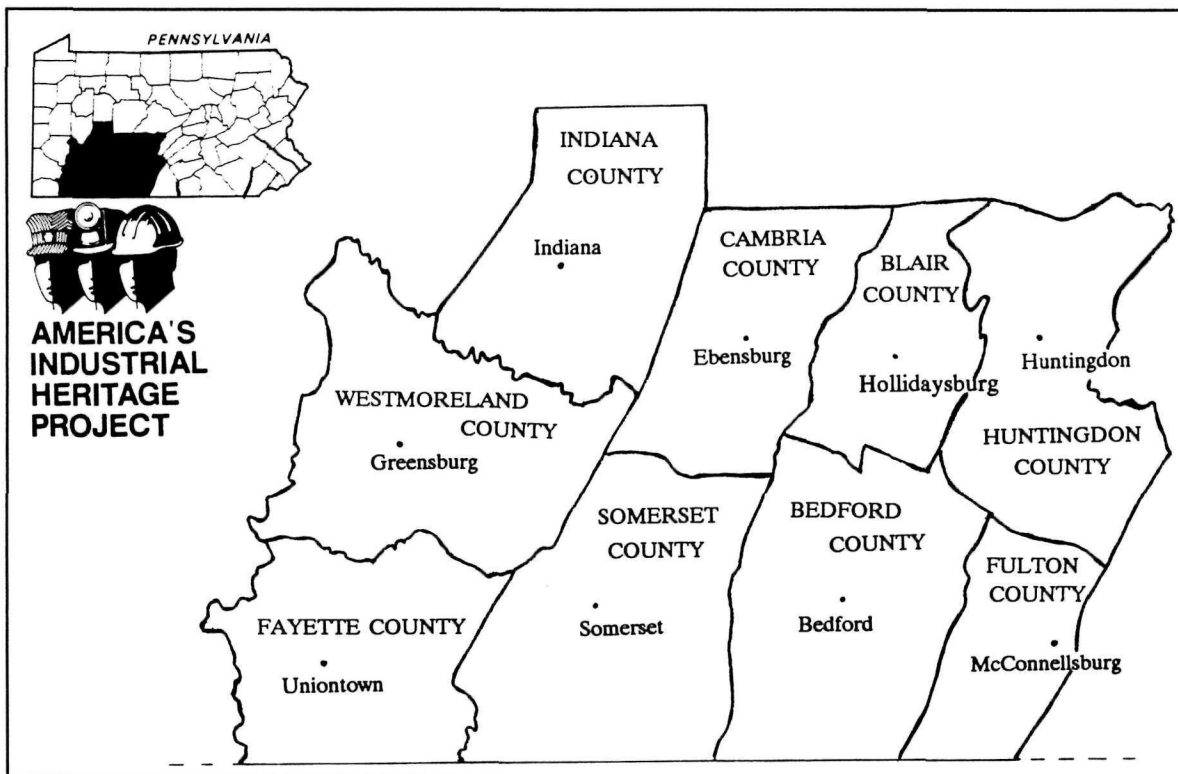


Fig. P.1 Nine counties and county seats in the AIHP region of Pennsylvania.

¹Donald Garfield, "Crossing Boundaries," *Museum News* 69 (November/December 1990), 43-47.

historic structures through measured drawings, large-format photographs, and written histories. These materials are prepared for a 500-year archival shelf life and transmitted to the Prints and Photographs Division of the Library of Congress.²

HABS/HAER work in the AIHP region has consisted of documentation of a number of specific buildings, county-wide industrial sites inventories, and more intensive studies of several towns. The county inventories and town histories have been issued as publications, and this study was planned as part of that series. It continues a company town theme, a topical and methodological focus engendered by the combination of AIHP's interest in industrial history and HABS/HAER's talents of documenting and researching historic structures.

This jointly sponsored work has suggested and provided ways to broaden the outlook of both agencies. For example, the two halves of HABS/HAER often tend to work independently, maintaining disciplinary boundaries between architecture and engineering and between histories of residential and public buildings and histories of industrial sites and processes. AIHP projects have sometimes brought the two together. The company town projects have been administratively sponsored and staffed by HABS, but the subject of company towns incorporates both industrial and residential aspects and therefore encourages blurring the distinction between HABS and HAER. The subject of industrial sites and company houses has also challenged the traditional HABS/HAER focus on single structures, requiring more attention to contexts such as manufacturing complexes, neighborhoods, and town plans.

In turn, HABS/HAER's research can be used to highlight the artificiality of AIHP's county-line boundaries. The AIHP territory formed only a segment of an economic hinterland that supplied a developing industrial infrastructure. The refractories industry crosses AIHP's boundaries in two ways. First, the heart of the Pennsylvania refractories industry was located in Clearfield, Clinton, and Centre counties just across AIHP's northern border. (Fig. 1.8) Second, most of the brickyards were controlled from company headquarters located in Pittsburgh or Philadelphia, and the wealth created from local clays by local labor was not returned except in the form of maintenance and occasional upgrades of initial capital investments.

AIHP was established to help formulate and then promote an industrial heritage to attract tourists and related development because the region, like many others across the country, had suffered a dramatic industrial and economic decline. HABS/HAER has documented remnants of the region's major industrial sites and company towns struggling to find ways of surviving the loss of their economic base. The record of industrial work conditions and the capricious rhythms of industrial and post-industrial economies that build communities and then abandon them certainly does not support a vision of American history as a story of national, technological, or economic progress. Instead, it emphasizes history's complexity and testifies to the determination and resilience of people and communities. As the Congressional legislation behind AIHP proclaims, one of the most important reasons to commemorate the region's industries is to recognize "the labor of their workers" and to represent the nation's "rich ethnic and social

²See Robert J. Kapsch, "HABS/HAER: A User's Guide," *Association for Preservation Technology Bulletin* 22 (1990), 22-34.

history."³ Such history takes place in and forms the buildings and sites recorded by HABS/HAER; we hope that some of its spirit is conveyed in the documentation.

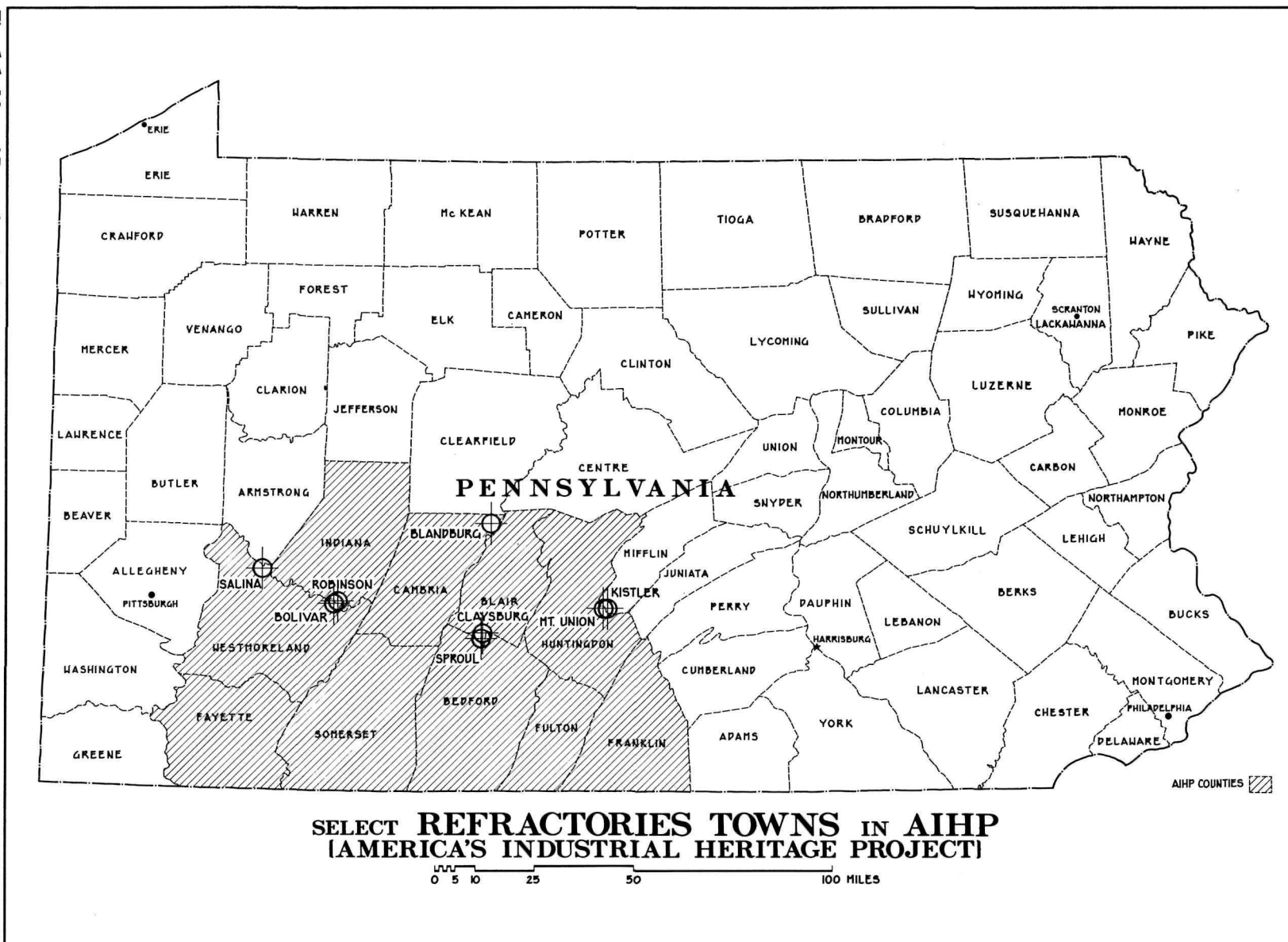
Many people contributed to the completion of this project. Preliminary research for Brickyard Towns was conducted by HABS historians Margaret M. Mulrooney in 1989 and continued by Nancy Spiegel in 1990. Project historian Kim E. Wallace completed the research and writing in 1991-92 under the direction of Alison K. Hoagland, senior HABS historian. Illustrations in the text include large-format photographs by David Ames of the Center for Historic Architecture and Engineering, University of Delaware, and by HAER photographer Jet Lowe; 35mm photographs taken by Wallace, Spiegel, and Nancy Shedd; floor plans, sketches, and maps by HABS/HAER architect Isabel Yang; and historic photographs from the collections of Laudelle Beers, Anthony Bernabo, Jean Markley, Thomas McGowan, C. C. Muffley, Leonard Stover, Donna Strong, the Harbison-Walker Refractories Company Retirees Committee, the Huntingdon County Historical Society, the Johnstown Area Heritage Association Archives, and the Mt. Union Historical Society.

The generosity of residents of the brickyard towns was invaluable to this study. They shared information, memories, photographs, and access to their homes. Their names are listed under "Interviews" and "Photographs" in the "Sources" section. Laudelle Beers, William Cunningham, Jean Markley, Thomas McGowan, and Leonard Stover were especially generous with their time and personal collections. A number of residents allowed us to traipse through their homes with notebook and measuring tape so that we were able to document the interior living spaces of a number of company houses. For this privilege the author and architect Isabel Yang would like to thank Denver and Laudelle Beers and Lonnie Wilson in Blandburg; George and Betty Sucke in Salina; Ruth Defibaugh and Margaret Davis in Sproul; Kenneth and Edna Cox and Samuel Horn in Kistler.

Many people outside the settings of the brickyard towns provided assistance in the form of information, sources, comments, advice, and support. The author would like to thank Jim Abrams and Susan Kalcik, AIHP Folklife Division; David Ames, Center for Historic Architecture and Engineering, University of Delaware; Nancy Bercaw, National Museum of American History, Smithsonian Institution; Timothy Boyle, Altoona Mirror library; Jay Ehle, North American Refractories Company; Elizabeth Goodman, Mt. Union Historical Society; Sarah Heald, HAER; Dean Herrin, HAER; Kim Hoagland, HABS; Audrey Iacone, Historical Society of Western Pennsylvania; Dan Ingram, Johnstown Area Heritage Association Archives; Glenn Jones, General Refractories Company; Catherine Lavoie, HABS; Jed Levin, Eastern Applied Archeology Center, National Park Service; Steven Lubar, National Museum of American History, Smithsonian Institution; Richard O'Connor, HAER; Fred Quivik, HAER Coal and Coke Survey; James Patrick Roan, National Museum of American History, Smithsonian Institution Libraries; Ken Rose, HAER; David Rosenberg, Archives of Industrial Society, University of Pittsburgh; Nancy Shedd, Huntingdon County Historical Society; Frank Shonkwiler, Harbison-Walker Refractories Company Retirees' Committee; and Isabel Yang, HABS.

³Quoted from Congressional legislation in "America's Industrial Heritage Project, Southwestern Pennsylvania," brochure, National Park Service, June 1989.

*Fig. 1.1 Map of Pennsylvania showing brickyard towns with extant company houses within the AIHP region.
 Drawn by Isabel Yang.*



Chapter 1. *INTRODUCTION: Refractories and Company Houses*

Heat is basic to all industry, without it our modern age would be nothing; the centuries before it would have been devoid of progress. Getting full value from heat depends entirely on how it is controlled and how its energies can be harnessed. . . . Without *refractories* heat is a ravaging giant.¹

As part of its documentation of the coal, steel, and transportation industries in the America's Industrial Heritage Project (AIHP) region of Pennsylvania, the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) has produced histories of towns dominated by coal mines, steel mills, and the Pennsylvania Railroad. *Brickyard Towns* moves beyond these primary and more visible industries to examine the refractory brick industry, which produced materials to build steel furnaces, coke ovens, and locomotive boilers and fireboxes. It focuses on eight towns with company housing that survives from the heyday of the brickyards during the first decades of the twentieth century. The towns are scattered across the region (Fig. 1.1) and represent a spectrum of refractories companies, company housing policies, and company town development. They include **Bolivar** and **Salina** in Westmoreland County, **Robinson** in Indiana County, **Blandburg** in Cambria County, **Sproul** and **Claysburg** in Blair County, **Mt. Union** in Huntingdon County, and **Kistler** in Mifflin County.²

The Companies

Each of these towns' brickyards was built by a different company, but by the mid twentieth century, the field was dominated by three companies which had acquired property throughout south-central Pennsylvania. Some familiarity with these companies is important for this study and a very brief history of each follows. The "big three" of refractories were formed through a series of mergers in the first decades of the twentieth century. Most of the businesses absorbed in the mergers owned just one or two brickyards and had names like Queen's Run, Elk, or Savage Fire Brick Company, reflecting their local, nineteenth-century origin. **Harbison-Walker Refractories** (H-W), based in Pittsburgh, emerged from the consolidations of companies with the largest holdings. About mid century these three companies had substantial holdings in the AIHP region. In 1946 Harbison-Walker employed 577 people at its plant in **Mt. Union** and 103 people at its **Blandburg** works. The second largest company, **General Refractories Company** (Grefco), had main offices in Philadelphia. In 1946 it employed 143 at **Salina**, 191 at **Mt. Union**, 714 at **Sproul** and **Claysburg**, and 86 at its Childs plant in Fayette County. The

¹John D. Ramsay, *Refractories: The Backbone of Industry* (Cleveland: North American Refractories Company, 1941), 9, emphasis added.

²Even though Kistler is located in Mifflin County and is therefore outside AIHP boundaries, it was included in this study because it is contiguous to Mt. Union and was considered a satellite of the larger town and the refractory brick industry that was centered there.

third company, **North American Refractories Company** (Narco), was headquartered in Cleveland and employed 406 in Mt. Union.³

North American is the youngest of the three companies. It was founded in 1929 with the combination of six companies--Ashland Fire Brick Company, Ashland, Ky.; Crescent Fire Brick Company, Curwensville, Pa. (Clearfield Co.); Dover Fire Brick Company, Cleveland, Oh.; Elk Fire Brick Company, St. Mary's, Pa. (Clinton Co.); Farber Fire Brick Company, Farber, Mo.; Queen's Run Fire Brick Company, Lock Haven, Pa. (Centre Co.)--representing important centers of refractories production in Kentucky, Missouri, and Pennsylvania. Two more companies were added to its roster in 1930--Mt. Union Refractories, **Mt. Union (Kistler)**, Pa. (Huntingdon Co.) and Savage Fire Brick Company, Frostburg and Mt. Savage, Md.⁴

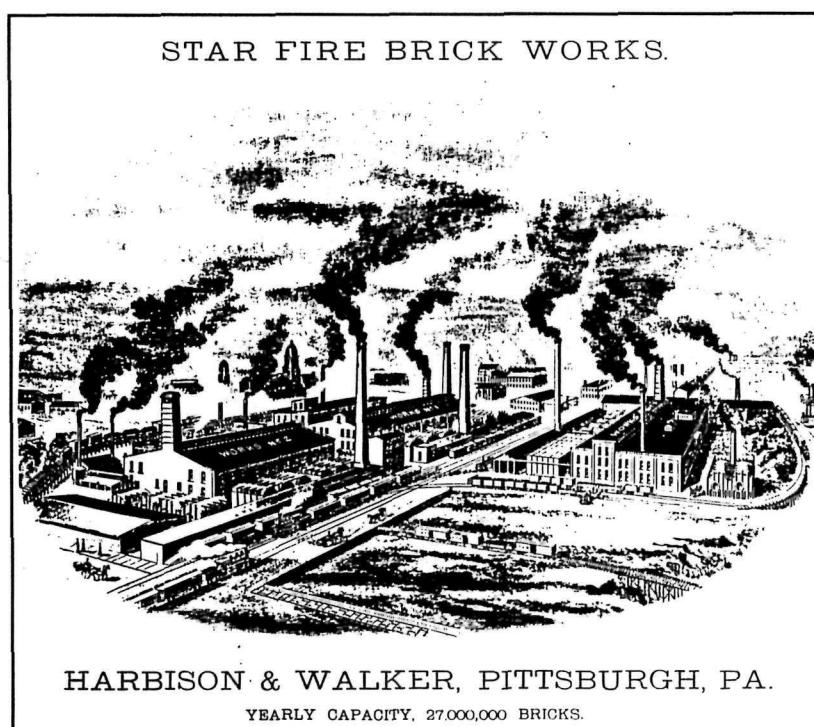


Fig. 1.2 Star Fire Brick Works, Harbison and Walker, Pittsburgh, Pa., late 19th century. Collection of Harbison-Walker Retirees Committee.

General Refractories

was formed in 1910 by acquisition of an existing company, the Sandy Ridge Fire Brick Company in Centre County, Pa., and the construction of a new silica refractories plant at Sarah Furnace in southern Blair County. The latter site was renamed **Sproul** after William Sproul, a principal founding partner and soon-to-be governor of Pennsylvania. In the next few years the company purchased plants in West Decatur, Pa. (Clearfield Co.); Olive Hill, Ky.; **Mt. Union**, Pa. (Huntingdon Co.); Beech Creek, and Orviston, Pa. (Clearfield Co.), and built two more silica brick works--one in Joliet, Ill., and one in

Claysburg, Pa., just north of Sproul. In 1930 Grefco purchased a fourth plant in the Pennsylvania region, Kier Fire Brick Company in **Salina**, Pa. (Westmoreland Co.). It continued to add facilities, including plants in Texas and California and a large plant and research laboratory in Baltimore, and became a dominant force in the industry, producing a complete line

³Pennsylvania Industrial Directory (1946).

⁴Corinne Azen Krause, *Refractories: The Hidden Industry, A History of Refractories in the United States, 1860 to 1985* (Pittsburgh: American Ceramic Society, 1987), 55.

of refractories for international clients.⁵

Harbison-Walker Refractories Company had a somewhat different history that reflected both nineteenth- and twentieth-century stages of refractories business history. It grew from one plant, the Star Fire Brick Company, opened in Pittsburgh in 1865. (Fig. 1.2) The original company was financed by ten partners who had no knowledge of brick making. Samuel P. Harbison was hired as their secretary and from that position he taught himself the manufacturing process and eventually became a partner himself. He was promoted to general manager in 1870. By 1875, he and one remaining original partner, Hay Walker, owned the company and had changed its name to Harbison and Walker. Andrew Carnegie's iron mills were their primary customers, and their development shadowed his. In the 1880s they began adding other plants and clay mines, and in the 1890s purchased two plants in south-central Pennsylvania, one at **Blandburg** in Cambria County and one at **Mt. Union** in Huntingdon County. Both of these brickyards were barely a year old when Harbison and Walker incorporated them into its expanding network. In 1902, one year after the merger of Carnegie's holdings into the U. S. Steel Corporation, the Harbison and Walker Company orchestrated a merger that brought its holdings to thirty-three plants and thousands of acres of clay mines.⁶

A number of Pennsylvania brickyards remained independent of the "big three." In 1946 in Alexandria, Huntingdon County, 88 people worked for Stowe-Fuller Refractories based in Akron, Ohio. The Eureka Fire Brick works employed 106 people in Mt. Braddock in Fayette County. In Westmoreland County, 179 people worked at the McFeely Brick Company near Latrobe, and the **Garfield Fire Clay Company** of **Bolivar** employed 107 people at its brickyard across the Conemaugh River in **Robinson**, Indiana County. A second brickyard in Indiana County at Clymer was owned by Hiram Swank's Sons Refractories and employed 107 people. Swank's had another plant with a staff of 129 in Johnstown, Cambria County, and A. J. Haws employed 108 at its Johnstown plant.⁷ Swank's and Haws, like most of the smaller-scale companies, were family businesses. They both opened in Johnstown in 1856. Andrew J. Haws founded his business to supply refractories to the Cambria Iron Works. Swank began manufacturing domestic pottery but by the late 1880s half of his production also consisted of refractories for Cambria Iron.⁸ None of these independent companies is still in business; their last brickyard was closed in 1990.⁹

⁵Krause, 50-51. "The General Refractories Company," *Bulletin of the American Ceramic Society* 22 (November 15, 1941): 363-65.

⁶Krause, 13-17, 42-43.

⁷Commonwealth of Pennsylvania. *Eleventh Industrial Directory of Pennsylvania, 1946* (Harrisburg: State Printer, 1946).

⁸*Ibid.* *Biographical and Portrait Cyclopedia of Cambria County* (Philadelphia: Union Publishing Company, 1896), 70-71. *Haws Refractories Company* trade catalog (Johnstown, Pa., October 1957). "Albert Swank, '10, Supplying Steel With Refractories," *The Mercersburg Academy Alumni Quarterly* (clipping, n.d.), 18-20. "100 Years of Service to the Steel Industry Hiram Swank's Sons," company history booklet, n.d.

⁹Ted Zelle, "International Refractories Sets Closing," *Johnstown Tribune-Democrat* (June 7, 1990), A10. International Refractories, a local partnership, operated the former Swank plant in Johnstown.

The eight brickyard towns in south-central Pennsylvania with surviving company housing (Fig. 1.1) represent each of the big three companies and one independent company: Garfield Refractories at Bolivar and Robinson; North American Refractories at Kistler; General Refractories at Mt. Union, Salina, Sproul, and Claysburg; and Harbison-Walker Refractories at Mt. Union and Blandburg. The towns' histories are intertwined with those of the companies as they were founded and merged, and as their officers planned marketing, production, and management strategies, made acquisition and, finally, divestment decisions.

Refractories

Refractories plants or refractory brickyards are these towns' common denominator and provide the justification for linking them together in this study. It is important then to understand something about what was made in them and why they were built.

Refractories were made in the form of bricks of various sizes, but mortars and especially "special shapes" (shapes other than rectangular bricks) were also important in company product lines. (Fig. 1.3)

Refractories are usually a light, buff color and are distinguished from ordinary building bricks by their composition of high silica and alumina clays and by being fired at much higher temperatures. These bricks, shapes, and mortars all have refractory qualities--that is they are resistant to thermal stress and chemical abrasion, potentially destructive forces that occur in some stage of most manufacturing and technological processes.

Refractories therefore play a fundamental role in many kinds of industrial production, a fact spokesmen for the industry often



Fig. 1.3 Harbison-Walker Refractories Company Standard Fire Clay Brick, 1938. Trade Catalog collection, Library, NMAH, Smithsonian Institution.

emphasize; one company-sponsored history was titled Refractories: The Backbone of Industry.¹⁰ (Fig. 1.4) Despite their importance to many manufacturing processes, refractories are also auxiliary and rather unglamorous, and the title of a more recent industry-sponsored history, Refractories: The Hidden Industry, reflects a common frustration that such an essential industry is accorded so little recognition.¹¹ This study recognizes the refractories industry; it was initiated to help explain the very visible forms--mine and plant sites, buildings, kilns, and company houses and towns (Fig. 1.5)--that the industry left on the landscape of central and western Pennsylvania.

Steel making consumed the largest portion of Pennsylvania refractories, and determined the course of the industry's development in the region. According to histories of refractories in general, their early development may also be explained in relation to advances in metals manufacture. Improvements in metal-making during the middle ages increased the temperature of furnaces. Because the stones and ordinary bricks used in furnace construction cracked and disintegrated in the higher temperatures, craftsmen replaced them with more resistant refractory bricks, sometimes called firebricks, which were molded from specially selected clays and fired at higher temperatures.¹²

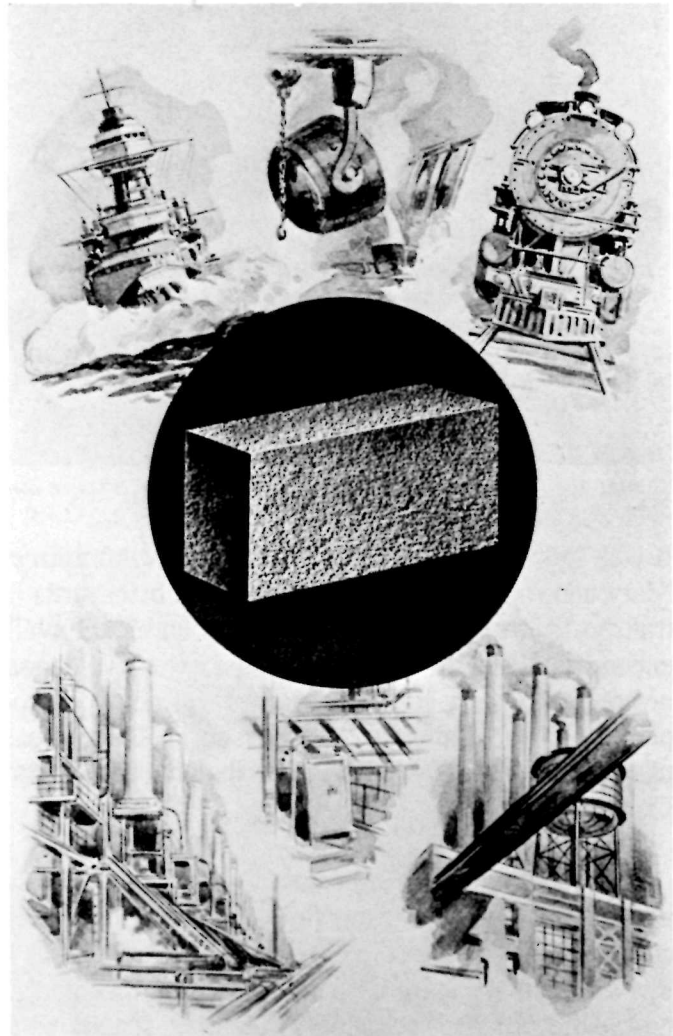


Fig. 1.4 Illustration from Refractories the Backbone of Industry, Cleveland, Oh., NARCO, 1941.

Manufacturers in the North American colonies imported refractories for glass and iron furnaces. By 1825, the first U.S. firebrick works was in operation in Woodbridge, New Jersey.

¹⁰Ramsay, 9-14. Krause, 1. Arthur F. Greaves-Walker, "History of Development of the Refractories Industry in the United States," Bulletin of the American Ceramic Society 20 (June 1941), 213.

¹¹Krause, xi.

¹²Krause, 2. Karl Gurcke, Bricks and Brickmaking: A Handbook for Historical Archaeology (Moscow, Id.: University of Idaho, 1987), 99. Hobart M. Kraner, "Refractories in the United States 1776 to 1976," Bulletin of the American Ceramic Society 56 (July 1977), 651.



Fig. 1.5 General Refractories Company houses, France Street, Sproul, 1991. Photo by David Ames.

It was followed in the 1830s and 40s by establishments in Pennsylvania, western Virginia, Maryland, and Ohio.¹³ Location of the brickyards depended on both access to rail or water transportation for deliveries to clients and local availability of raw materials. Pennsylvania encompassed territory with the most extensive deposits of refractory clays and rocks. By the late nineteenth century it was the largest refractories producer, but the industry was also important in parts of Ohio, Kentucky, and Missouri. These areas supplied refractories to iron, steel and other primary manufacturing industries that coalesced around cities like Pittsburgh, St. Louis, and Chicago.

The two most important refractories of the late nineteenth and early twentieth centuries were firebricks made from fire clay and silica bricks made from ganister. Clay's basic mineral components are "hydrous, aluminum silicates," but ingredients and proportions vary.¹⁴ Refractory clays were selected for their purity and high levels of silica or aluminum. Depending on the density and hydration of the clay, it may be found in plastic, earthy, or rock form and is "won" or mined from both surface and underground deposits. In Pennsylvania, fire clay was found primarily throughout the ridges of the Appalachian mountains that arc across the state and sometimes occurred in a seam underlying coal beds. Ganister, for silica bricks, is a quartzite rock with a high silica content. In some areas, particularly in central Pennsylvania, a seemingly endless supply of ganister was strewn across the ridge tops and mountain sides. Brickyards were often located on level terrain at the base of the ridges so that brick storage sheds could be built next to a river or railroad line and gravity aided transport of the dinkey cars as they were brought down from the mines or quarries. (Figs. 1.6-7)

¹³Locally made firebrick were found in the ruins of a ca. 1600 Spanish sugar mill near Daytona, Florida. The Boston Manufacturing Company may have made firebrick as early as 1790. Greaves-Walker, 213-15. Kraner, 651, dates the Woodbridge, N.J. plant to 1812.

¹⁴Gurcke, 3, 128.

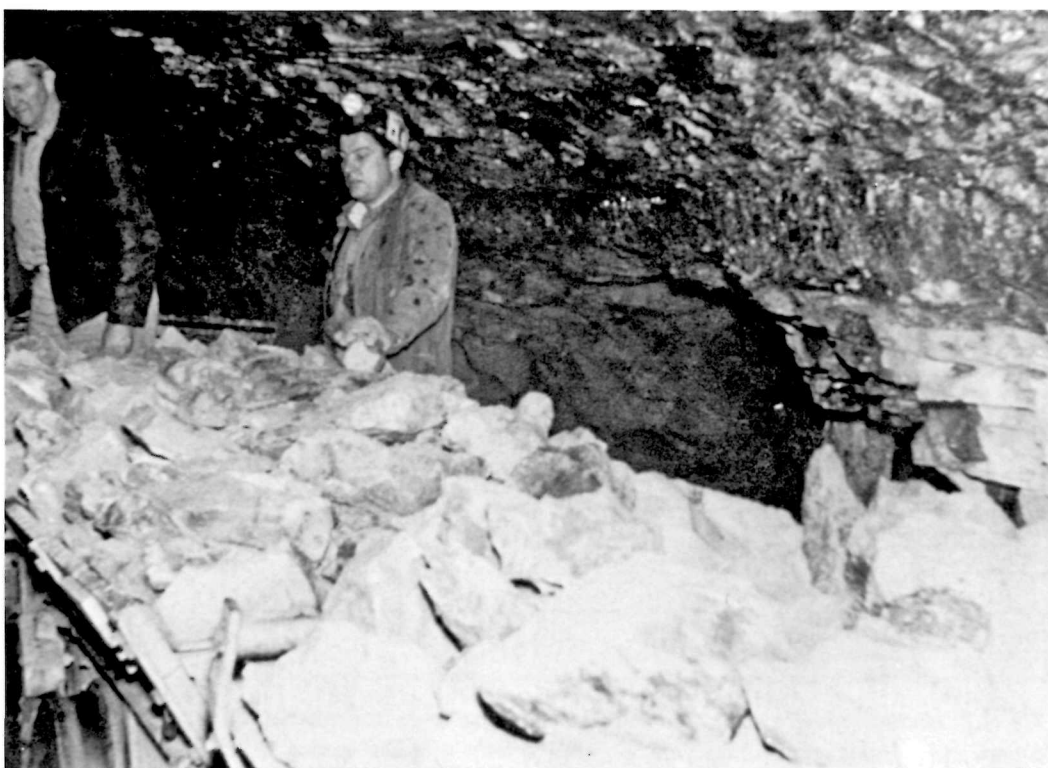


Fig. 1.6 Foster Troxell and Robert Johnson with loaded dinkey cars in the clay mine at Blandburg. Collection of Thomas McGowan.



Fig. 1.7 Dinkey cars and track from a Pennsylvania ganister mine. Collection of Harbison-Walker Retirees Committee.

Refractories Company Plants/Employees

County	1919	1925	1931	1938	1946	1956	1980	1991
Bedford	1/60	---	---	---	---	---	---	---
Blair	2/642	2/701	2/613	2/636	2/714	2/633	3/403	1/58
Cambria	6/775	6/831	5/764	4/668	4/437	4/371	1/42	1/40
Centre	5/431	9/637	6/568	6/775	6/727	4/387	1/244	1/185
Clarion	2/287	6/305	2/174	2/243	2/263	2/166	3/135	1/41
Clearfield	8/1274	15/2400	14/1553	15/1678	15/1563	9/1338	4/765	3/244
Clinton	4/590	10/1005	9/311	7/379	3/221	3/128	---	---
Elk	1/143	3/125	1/64	1/47	1/40	1/31	---	---
Fayette	9/575	3/90	6/183	3/320	3/226	3/191	---	---
Huntingdon	4/1428	4/1239	4/1233	4/1172	4/1262	3/697	2/335	---
Indiana	2/82	2/140	2/196	2/267	2/214	1/112	2/63	---
Mifflin	---	1/149	1/170	1/226	1/213	1/152	---	---
Somerset	1/31	1/---	---	---	---	---	---	---
West-moreland	5/322	8/453	4/415	4/430	3/322	4/343	1/80	---

Fig. 1.8 Number of refractories plants/number of employees in Pennsylvania counties with significant production. Source: Pa. Industrial Directories.



Fig. 1.9 Hiram Swank Refractories Company houses, Irvona, Clearfield County, 1991. Photo by Kim Wallace.

It was designed to achieve both by focusing on company towns and company housing. Most brickyards were built adjacent to an existing town or village which the brick company used as the framework to build a support community for its operations. Towns included in this study were selected based on whether they fell within AIHP boundaries and on whether they had surviving

Industrial directories that list manufacturers and number of employees by county help chart the geography of Pennsylvania refractories. (Fig. 1.8) Clearfield, Clinton, and Centre counties just north of AIHP formed the center of the industry. Clearfield peaked in 1925 with fifteen plants and 2,400 employees, Clinton County had ten plants and 1,005 employees, and Centre County had nine plants and 637 employees that year. Eight of the nine AIHP counties also had important refractories sites. Two of the counties had a higher employee-to-plant ratio than those to the north; in 1925 Huntingdon had 1,239 employees in four plants, Blair County had 701 employees in two plants.¹⁵

Company Houses

This study was framed by the two goals of providing a history of the Pennsylvania refractories industry and abiding by HABS's mandate to document extant structures.

¹⁵Fifth Industrial Directory of Pennsylvania, 1925 (Harrisburg, Pa.: Bureau of Statistics and Information, 1925).



Fig. 1.10 HABS/HAER architect Isabel Yang with scale stick, Denver and Laudelle Beers at 29-31 Boyd St., Blandburg, 1991. Photo by Kim Wallace.

houses built by refractories companies for their workers.¹⁶ (Figs. 1.10-11)

The subject of company housing has received relatively little attention. It is usually mentioned in company town studies but only as a descriptive feature of the town, not as an object of study that might lead to larger insights. Company housing has potential as both a locus and a lens for analysis. It is at the intersection of a number of different disciplines and issues. By definition it conflates the usually separate spheres of work and home, and it confounds historians' usual traditional-to-modern sketch of the home's transformation from a place of production to a place of consumption. The topic of company housing of refractories company towns could also bear some analysis to uncover its own built-in premises. Why should "company town" and "company house" seem such automatic and meaningful categories to us? How can you identify a company house? Why do we often assume that they are identifiable by sight?

¹⁶Other communities in AIHP were surveyed that once had refractories plants but either never had or no longer have company housing. They include: Hyndman in Bedford County; Johnstown in Cambria County; Mt. Braddock, Connellsville, Layton, and Childs in Fayette County; Alexandria in Huntingdon County; Clymer in Indiana County; Williams in Somerset County; Latrobe in Westmoreland County.



Fig. 1.11 Photographer David Ames with large-format camera at 55 Pine St., Kistler, 1991. Photo by Kim Wallace.

In particular for this study, what did refractory bricks really have to do with houses? At first I looked for an obvious, literal connection--houses that were made of refractory bricks. When a company manufactured something that could be used as a building material, it seemed logical that it would use its own supplies to build company houses. But I learned that refractory bricks were considered so specialized that they were not wasted as mere building bricks. In all eight towns I found only one house made from a combination of hollow tile and flawed refractory bricks (Figs. 3.15-16). I then looked for a connection between workers and the houses in terms of a hierarchy based on skill level, but there was no set correlation beyond a general distinction between management and the rest of the workers and even this distinction was not made consistently in all the towns. I looked for a similarity in housing across the different towns but found no common model even when the company was the same. The towns represented a wide variety of house forms, housing policies, and town development.

Nothing seemed to provide any overall connecting link to justify the way the project was framed. But as I became familiar with the towns, local brickyards, and their housing I was struck by the fact that all of the company houses in all of the towns were built within about a thirty year period and then were all sold or demolished in a twenty-two year period. This seemed the fundamental connection between the houses and the central puzzle of the study. Why were all of the houses built between 1893 and 1924 even when the brickyards were built from the 1840s through 1912? Why was company housing taken for granted in one era and viewed as illogical in another?

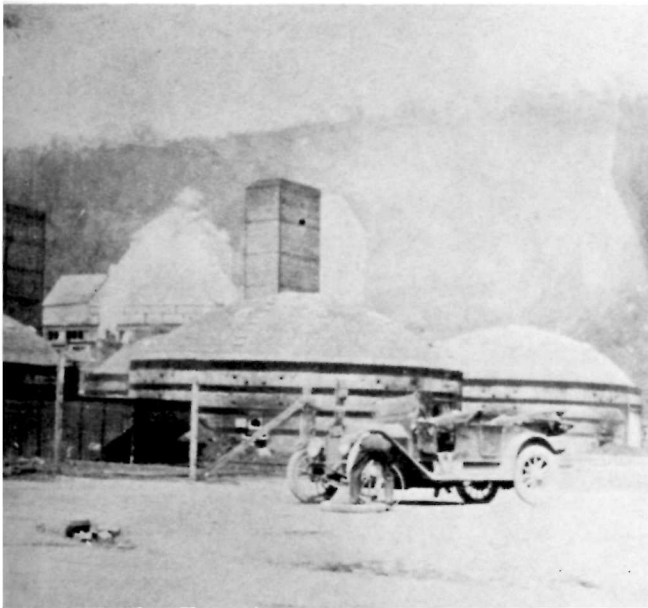


Fig. 1.12 Fixing a flat tire at the Standard Refractories brickyard at Claysburg, ca. 1920. Collection of Jean Markley.

Understanding refractories companies' housing requires a familiarity with the history of the industry, the history of its technology, and the history of the individual brickyard towns. Chapters 2 and 3 are organized to provide that background and set up the final chapter which addresses questions about company housing. Chapter 2 outlines how brickyarders made refractory bricks and shapes, and how that work and technology and the refractories themselves changed over time. Chapter 3 is made up of histories of the towns arranged in chronological order of the founding of their brickyards. These individual histories give a local account of those things the towns had in common--founding of a brickyard, the company's shaping of the town, construction of company

houses, decline of the brick industry. At the same time, each section tells a different story and illuminates a different aspect of the history of company towns, depending on the local history and

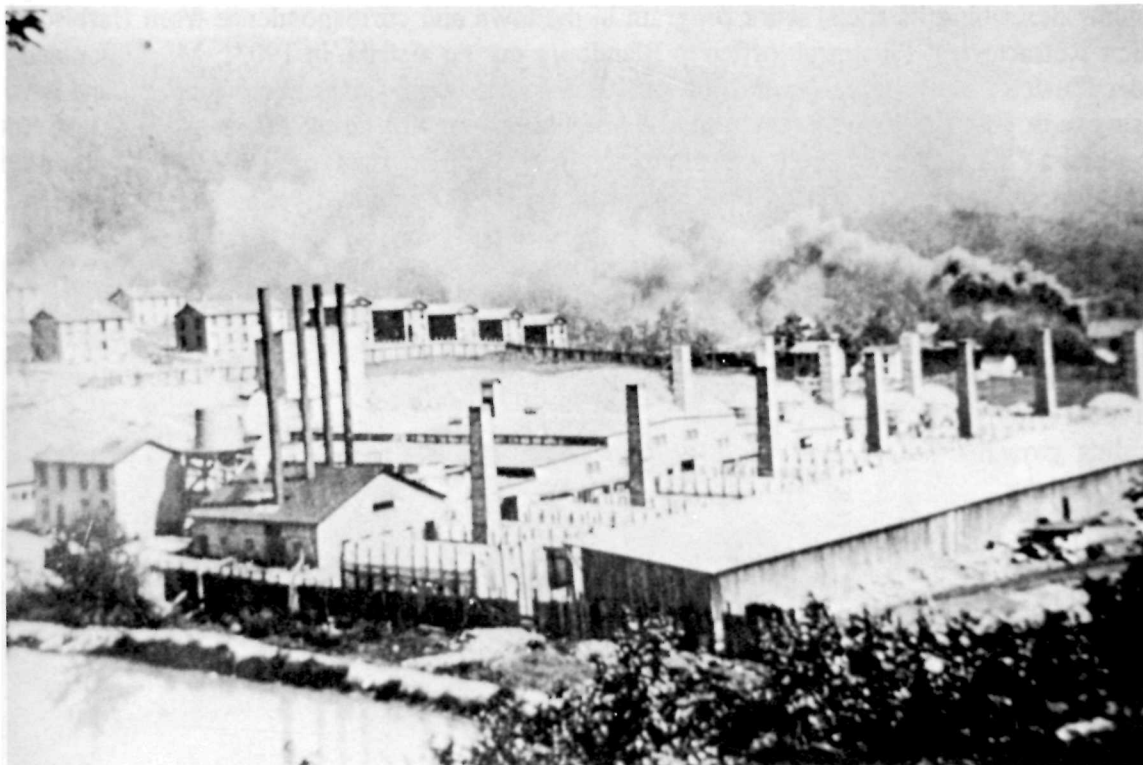


Fig. 1.13 Harbison-Walker brickyard and company houses on Ganister Hill, Mt. Union, undated. Collection of Mt. Union Historical Society.

available sources. Bolivar and Robinson provide an example of shifting mid-nineteenth-century partnerships succeeded by local family ownership that continued through the twentieth century when most refractories businesses were taken over by a few big companies. The Salina brickyard is important because the owners made subsequent upgrades to their operation, installing brick-making machines, building company housing, then

pioneering the installation of mechanized tunnel kilns. In Blandburg, the problematics of company-employee relations are highlighted because of two surviving records--a 1916 company pamphlet describing its social work program in the town and correspondence from Harbison-Walker Refractories' Pittsburgh office to Blandburg during a strike in 1903. Mt. Union and Kistler illustrate how companies thought of housing as a way of controlling workers and how housing built with this same intent could be executed in very different forms and plans. Sproul represents a "classic" company town--almost entirely company owned, with simple and uniform company houses, strong company paternalism, and workers who held an adamant anti-union stance until the company abandoned its paternalistic policies.

Claysburg demonstrates the brickyard's impact on a local community, including growth from private housing development as well as the company's construction of houses for new residents. Finally, local newspaper coverage of the Claysburg plant's closing gives us some sense of the impact and

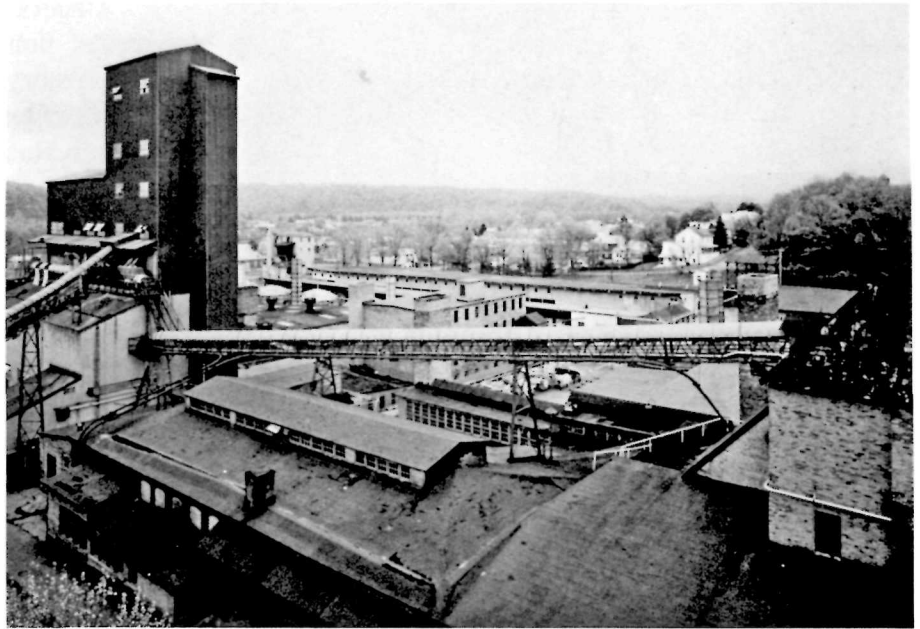


Fig. 1.14 View east over the Harbison-Walker brickyard, Mt. Union, 1989. Photo by Jet Lowe.

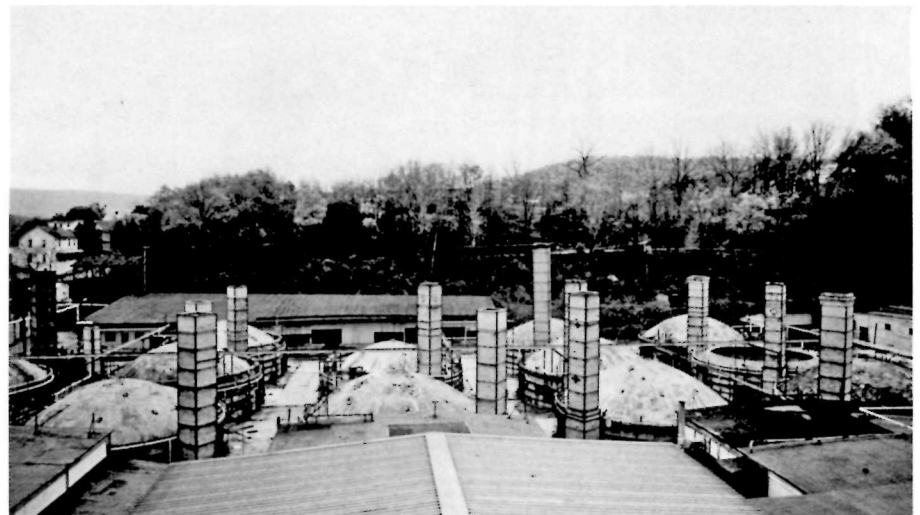


Fig. 1.15 View east over the Harbison-Walker brickyard, Mt. Union, 1989. Photo by Jet Lowe.

course of the industry's decline as it was entangled with and explained through issues of labor, technology, and changing economies.

Chapter 4 is a concluding summary of the brickyard towns and the refractories industry, focusing on company housing. It uses Chapter 2 to situate company housing in the development of brickyard technology and draws on Chapter 3 for examples of both the variety and common denominators of company housing. The proximity of housing and

brickyard points to the interdependence of the brickyards and the surrounding communities and underscores the importance of studying them as complementary parts of a whole. The landscape of southwestern and south-central Pennsylvania is marked by remains of the refractories industry, from quarrying sites to kilns to company houses and converted company stores and office buildings. They form part of the framework for reconstructing an industry that has virtually disappeared from the area in order to understand the communities that have survived without it.

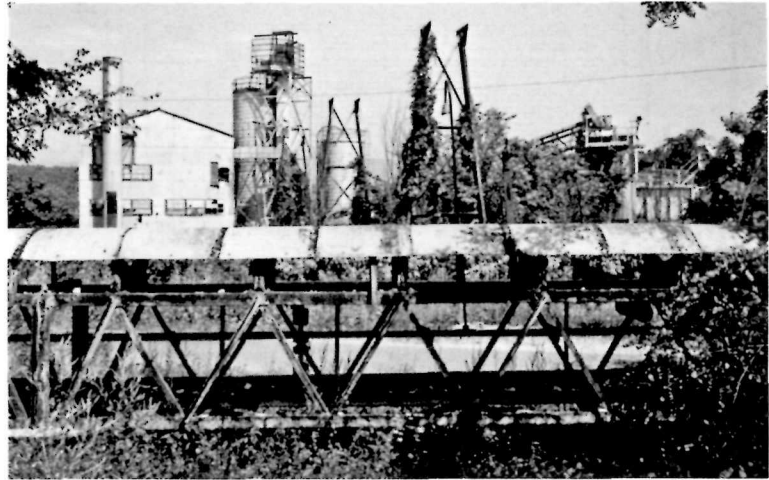


Fig. 1.16 Collapsed conveyor on the west side of the Harbison-Walker brickyard ruins, Mt. Union, 1991. Photo by David Ames.



Fig. 1.17 Ruins of the Harbison-Walker brickyard, Mt. Union, 1991. Photo by David Ames.

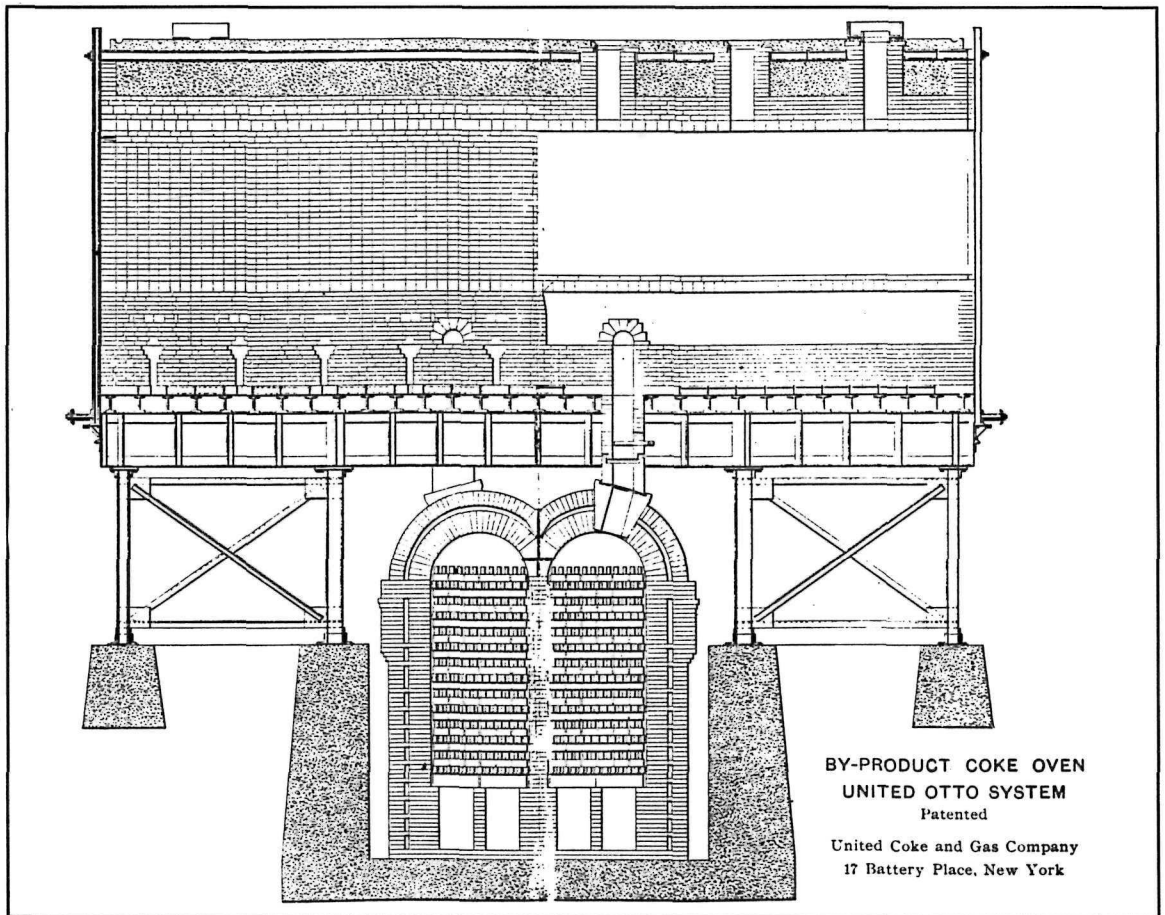


Fig. 2.1 Refractories in a by-product coke oven. Catalogue, Harbison-Walker Refractories Co., 1908.

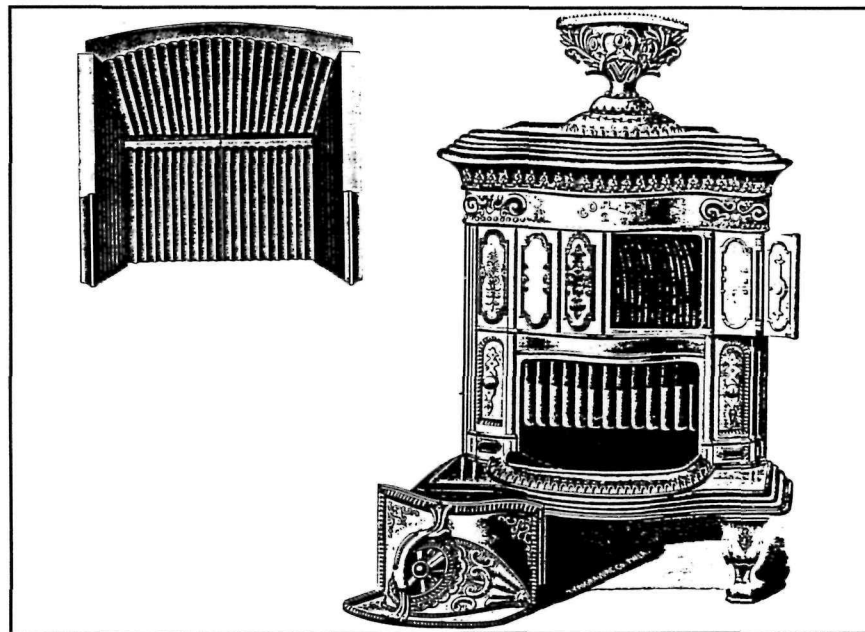


Fig. 2.2 Refractory lining for a heating stove. Illustrated Catalogue, Harbison & Walker, 1894.

Chapter 2. MAKING BRICKS

The English idea with regard to blast furnaces is to run moderately and save the lining. What do we care about the lining? We think that a lining is good for so much iron and the sooner it makes it the better.

--Charles S. Price, General Manager, 1892-1907
Cambria Steel Company, Johnstown, Pa.¹

The rapid expansion of United States industry from the late nineteenth century through the early twentieth created a great demand for refractories. Brickyard workers made refractory mortars, bricks of all sizes, and a miscellaneous category of "special shapes" that included such things as hot tops, arch tiles, nozzles, and crucibles. (Fig. 2.3) Large-scale consumers of these products included beehive and by-product coke ovens, blast and open-hearth steel furnaces, glass furnaces, ship boilers, and locomotive fireboxes. (Figs. 2.1-2, 2.4-5) Brickyarders had a sense of where their refractories would be shipped and how they would be used, but they rarely had the opportunity to see the end use of their work.

Using Bricks

Handling bricks after they reached their destination was sometimes as labor intensive as making them. They had to be unpacked and often unstacked and restacked before they were used to build a new structure or patch an existing one. At any manufacturing operation where refractories were used there were workers skilled in bricklaying. In a large steel company bricklayers were further specialized to

work on repair or construction of various parts of the furnaces or of captive coke ovens. Throughout a furnace's running life occasional weak spots--potential "burn-outs"--in its lining occurred, and "hot bricklayers" or "hot doggers" made repairs, chiseling out an area around the decayed brick and setting in replacements. This job was one of the steel mill's most stressful and

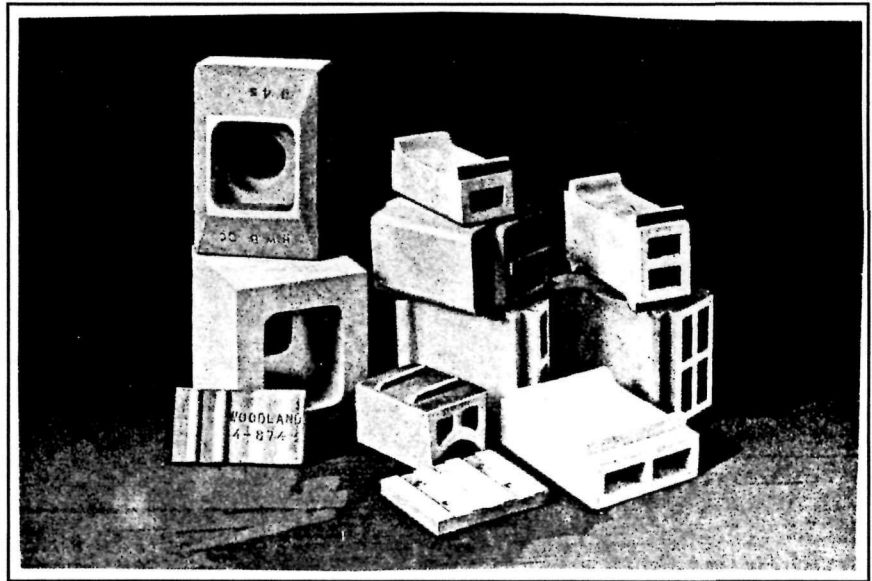


Fig. 2.3 Examples of "special shapes" in fire-clay refractories. Modern Refractory Practice, 1937.

¹The Romance of Steel (New York, 1907), 362.

dramatic. Hot doggers wore layers of clothing to block heat and protect their skin from the heat of a charged furnace. When the furnace was at a "tapped out" or drained stage they put on wooden shoes and extra clothing, took a breath of relatively cooler air to last during their immersion in still searing heat, and carried patching bricks or bags of mortar inside the furnace. As one hot bricklayer testified, it was a job where "there was fear . . . you had to start young" to become inured to the stress. When the lining was deteriorated beyond repair, the furnace was tapped out or drained and allowed to cool somewhat. Then laborers stripped the caked bricks

from their metal framework, and a gang of "cold bricklayers" began the complex task of rebuilding the furnace's refractory body.²

As the steel industry expanded companies built more furnaces and used them much harder than they had in the past. Thousands of bricks were used to form furnaces' interior linings and checkerwork. In addition to bricks for new construction, there was steady demand for repairs and relining. According to the *Iron Trade Review*, in the 1870s refractory linings lasted fifteen to twenty years, but with more intense use after the turn of the century they had to be replaced every two to five years.³ Coke ovens, which supplied coke for steel making, were entirely constructed of bricks. As the nineteenth century ended, thousands more of them were built and they were subjected to higher production schedules. About five thousand bricks were needed to build one oven. While the entire structure might stand twenty years,

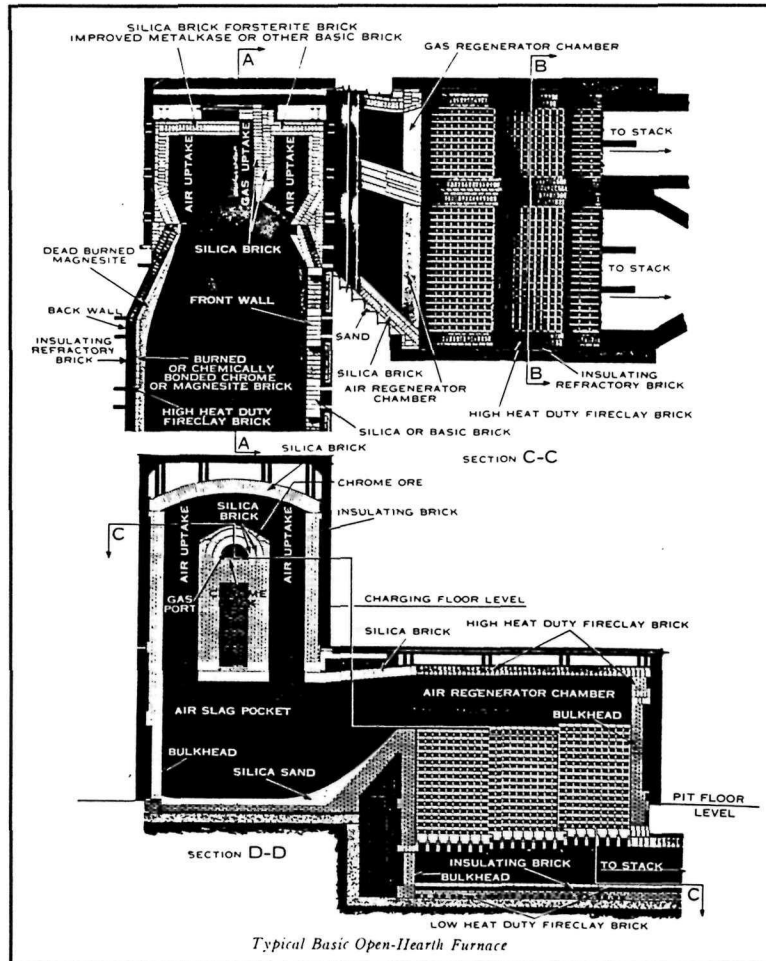


Fig. 2.4 Refractories in a basic open-hearth furnace. *Modern Refractory Practice*, 1937.

machines that punched coke out of the ovens often damaged them, creating another source of

²Walter Gemza (hot bricklayer, Bethlehem Steel, Johnstown, Pa.), interview by Bruce Williams, June 27, 1990. George Buchan (cold bricklayer, Bethlehem Steel, Johnstown, Pa.), interview by Bruce Williams, July 9, 1990. Charles Rumford Walker, *Steel: The Diary of a Furnace Worker* (Boston: Atlantic Monthly Press, 1922), 130-33.

³A. F. Greaves-Walker, "Fire Brick Problems of Metallurgy," *The Iron Trade Review* 39 (August 23, 1906), 17.

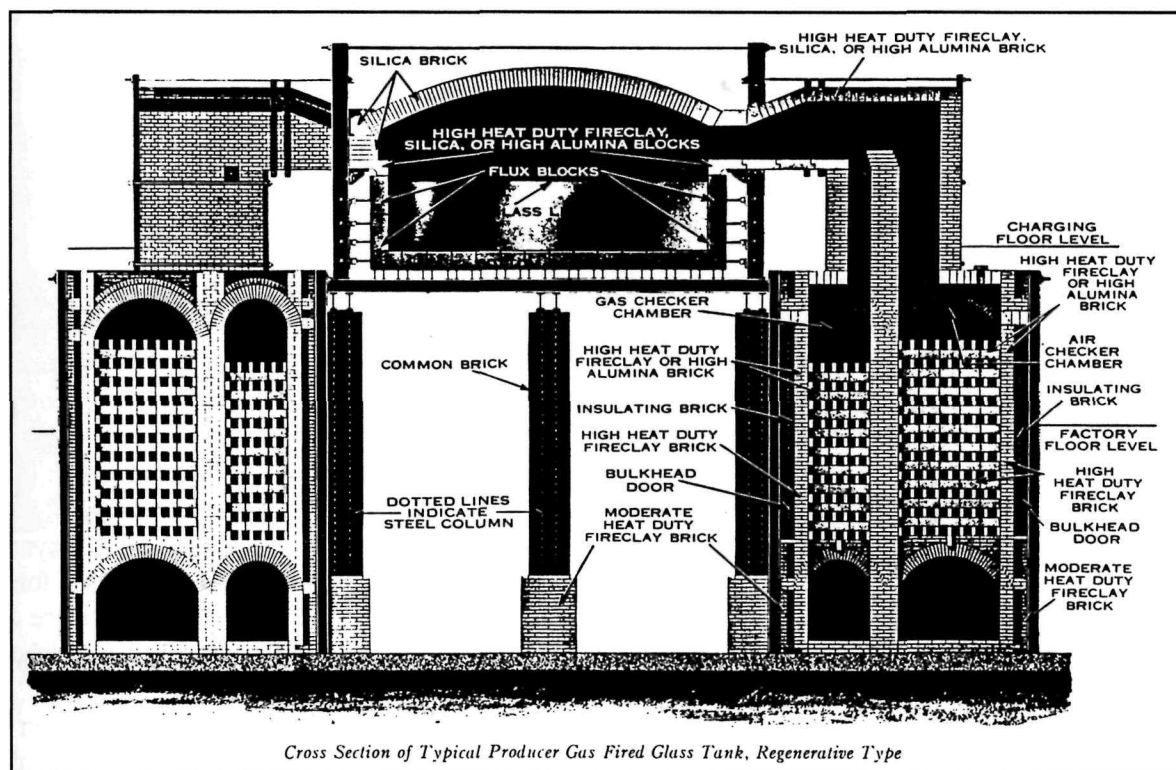


Fig. 2.5 Refractories in a regenerative-type glass tank. *Modern Refractory Practice*, 1937.

steady demand for new bricks.⁴

Making Bricks

When the first brickyards in south-central Pennsylvania began operation in the mid nineteenth century, brick making, like bricklaying, was a very labor-intensive process. Industry historians liked to say that it had changed little since bricks were first burned in kilns about 2000 B.C.⁵ By 1990, however, this staple industry had changed so drastically that only one plant in the region, at Sproul, Pa., was still operating, and technically, it did not qualify as a brickyard because it no longer produced bricks but instead made refractory mortars, cements, and castables. It employed only twenty-five compared to 256 in 1919, its peak year. The basic elements of making bricks were the same, but they had been transformed by shifting economies, science and machinery with drastic consequences for the people who made them and the communities in which they lived.

⁴"The Manufacture of Fire Brick for Coke Ovens," Connellsville *Weekly Courier*: Special Historical and Statistical Number (May 1914), 58.

⁵C. H. Schumann, "The Manufacture of Bricks," *Cassier's Magazine* 4 (October 1893), 403. Karl Gurske, *Bricks and Brickmaking: A Handbook for Historical Archaeology* (Moscow, Id.: University of Idaho Press, 1987), 39.

* * *

Perhaps there is no process so easy to describe and yet so hard to execute as the making of brick. The clay is dug, kneaded, moulded, and burned, and each detail appears so simple that it would seem any one ought to be able to transform a little clay into a good brick; but between the pit and kiln stand two characteristics which must be present in order to insure good results--these are experience and skill.⁶

Histories of technology and work in the nineteenth and twentieth centuries usually tell a story of mechanization that results in higher production, and from the workers' point of view, reduces the number of jobs and decreases the skill requirements and increases the monotony of those remaining. Although the history of brick making in south-central Pennsylvania follows the general outline of mechanization, there are important qualifications. Mechanization in the brickyards was never monolithic, it progressed in fits and starts and was incomplete when the plants closed. Even though technology changed and often mechanically replaced workers'

expertise, brickyarders did not simply forfeit their "experience and skill." They elaborated it to adopt new equipment to their own understanding of the brick-making process. So rather than a story of the progression of labor-replacing and alienating machinery, a history of brick-making technology should be more a history of the machinery brickyarders had to work with, of how brickyarders made bricks.

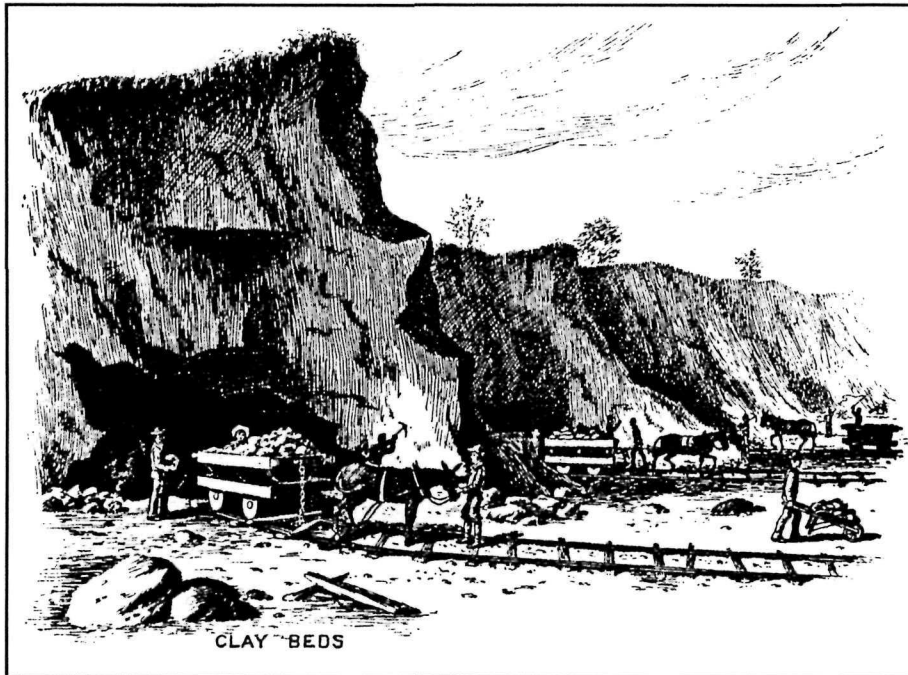


Fig. 2.6 Miners loaded clay onto carts pulled by mules to the brickyard. *Scientific American*, 11/27/1886, 342.

inherited from early building brick manufacture.⁷ Some form of mud was mixed, shaped, dried, and then baked. This was the basic framework within which brickyarders saw their work; it remained unchanged. The refractory brick industry was transformed by three factors, each with

The essentials of refractory brick making were set as

⁶"Brick Making," *Scientific American* (November 27, 1886), 343.

⁷Schumann, "The Manufacture of Bricks." "Brick Making," *Scientific American* (November 27, 1886), 343. Kevin Anderson, "A History of Brick Manufacturing," *Fine Homebuilding* 53 (April/May 1989).



Fig. 2.7 Mules pulling a dinkey car at Swank Refractories in Clymer, Indiana County. Collection of Johnstown Area Heritage Ass'n Archives.

an increasing degree of impact: gradual mechanization of each step in the brick-making process, changes in the composition of refractories, and changes in the form and use of refractories. Brick making and changes in the industry are outlined in the remainder of this chapter.

The typical mid-nineteenth-century

brickyard contained the same elements as those in Pennsylvania over a century later. There was a clay pit, grinding and tempering machines, a molding room, drying floor, kilns, and storage sheds. Brick making was understood in terms of a series of steps, and the brickyard was ordered into corresponding sections.⁸

Wheelers pushed loaded wheelbarrows between the steps. Most workers specialized in one section, although, over time, they might have worked in several different areas. The tools and machines they worked with were specific to each section.

A clay mine to supply the molding room and a coal mine to fuel the kilns were often located on or near the brickyard site. Clay miners loaded raw clay onto carts or railroad dinkey cars, then mules hauled them from the mine to the brickyard clay pile



Fig. 2.8 Underground mining of Pennsylvania flint fire clay. Ramsay, 1941.

⁸The following outline of the brick-making process has been assembled from a number of sources. One of the best descriptions is given in William B. Fulton et al., *A Study of Silicosis in the Silica Brick Industry* (Harrisburg: Bureau of Industrial Hygiene, Department of Health, Commonwealth of Pennsylvania, 1941), 4-23.



Fig. 2.9 Surface mining of ganister on the mountain above Mt. Union, ca. 1955. Collection of H-W Retirees Committee.



Fig. 2.10 Ganister miner in front of his dump truck, Mt. Union, ca. 1955. Collection of H-W Retirees Committee.

where weathering helped remove impurities and made it more workable. (Figs. 2.6-11) If the clay was in rock or flint form it was dumped into a grinding machine (Figs. 2.12-13) with heavy iron rollers that reduced it to stone- and pebble-sized pieces which were then fed into a crushing machine, variously called a "dry pan" or "roller" or "pug mill." Next, a "mud machine," "pug mill," "tempering" or "wet pan" was used to thoroughly knead the dampened, now pliable crushed clay. The "pan tender" oversaw the mixing and decided what other ingredients to add and when the mixture--called mud--reached the proper consistency. (Fig. 2.14) He might mix in proportions of water, other clays, lime, crushed charcoal, or "grog"--crushed bricks. Charcoal insured that the bricks would burn more thoroughly, grog acted as a binding and



Fig. 2.11 Miners on the clay pile at Salina, early twentieth century. Collection of Leonard Stover.

strengthening material. Once prepared, mud was carried to a molding table where a molder kneaded, dropped and tamped it into a mold that was dampened and dusted with sand. The molder then "struck" the brick, scraping a straight edge across the top of the mold to remove excess mud. "Off-bearers"--often teenage boys--carried the molds to the drying yard or floor, dumped out the bricks, and set them in rows to dry. (Figs. 2.15-17) While on the drying floor the "green" bricks were usually repressed in a portable brick press or mold to increase their density and uniformity. (Figs. 2.18-19) Dried bricks were stacked on a wheelbarrow and taken by a "wheeler" to either a round "beehive" or a rectangular kiln where "green brick setters" and "tossers" arranged them in intricate stack designs to allow the maximum amount of heat circulation and even burning. (Figs. 2.20-23) When filled, the kiln door was bricked in and sealed, and kiln firemen lit fires in surrounding

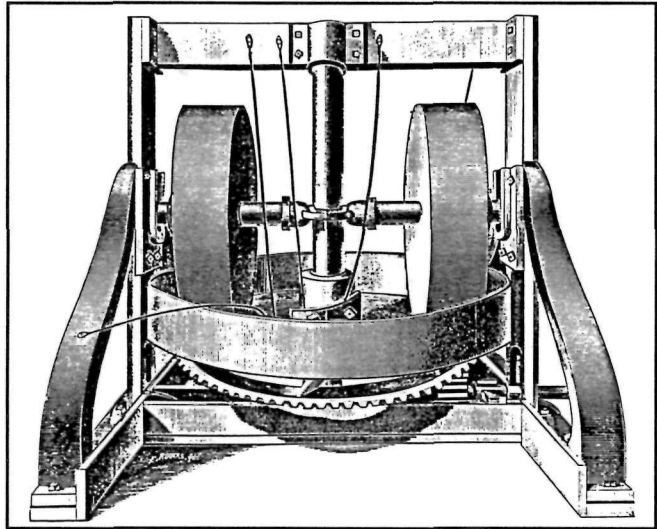


Fig. 2.12 Iron frame grinding pan for grinding hard clay, ca. 1875. *Catalogue of Machinery*, Cohocksink Brick Machine Works, Philadelphia.



Fig. 2.13 Removing clay from a grinding pan at Swank Refractories in Johnstown, ca. 1940. Collection of Johnstown Area Heritage Ass'n Archives.

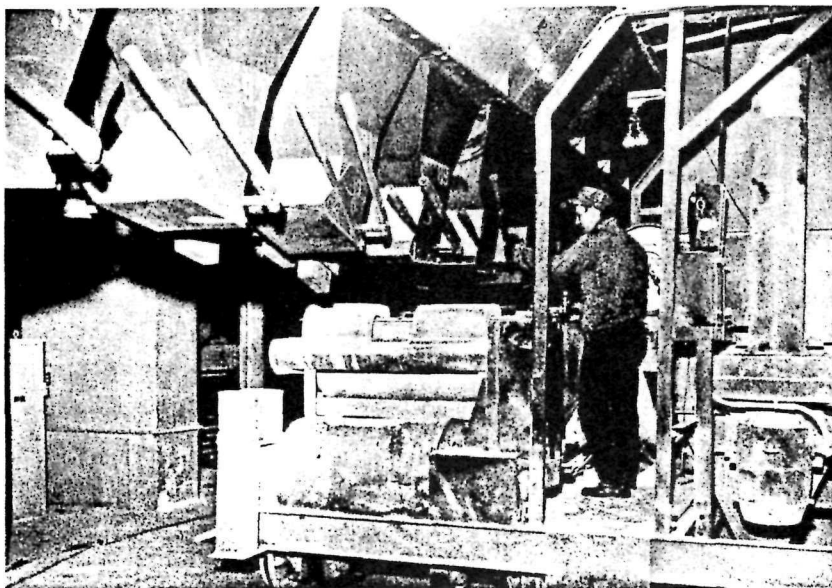


Fig. 2.14 Blending clays for mixing. MacCloskey, 1952.

fireboxes, raising the temperature gradually over a period of days to a peak of more than 2,000 degrees. Cooling also had to be controlled and gradual so the firing cycle might take up to twenty days, and loading and unloading another several days. "Burnt brick" handlers unloaded the kiln, sorted, graded, and wheeled bricks to storage sheds or packed them directly onto carts, boats, or railroad boxcars for shipment. (Fig. 2.24)

Brick making required the combination of a great deal of hand labor with the skill and site-specific knowledge accumulated in years of experience. As the Scientific American observed in 1886:

No rule can be laid down for the handling of clay; the routine which in one yard produces first quality would, if transferred without change to another, only cause miserable failure. The method of burning and the degree of heat which in one locality will turn the clay there found into good, hard brick would, in the next yard perhaps, yield only a kiln of spoiled and useless clay. So that it is safe to say that a brickmaker who had only worked one clay in one yard would be compelled to begin anew his apprenticeship if he were thrown in contact with different features.⁹

As demand for refractory bricks increased in the later years of the nineteenth century, efforts to cut production costs focused on reducing labor and manufacturing time and finding ways to rationalize the idiosyncracies of each brickyard. Reducing brick manufacturing to a mechanized routine was not a simple undertaking. It progressed in a piecemeal fashion as various parts of the process were subjected to chemical and mechanical analysis in a search for ways to replace human labor and judgment.

One might assume that the most crucial skills in brick making were contributed by the pan tender who oversaw the mixing and preparation of the clay or by the fireman who controlled the duration and temperature of burning. Yet, it was the molder who was generally regarded as the "key craftsman" who "dictated the quality and quantity of production."¹⁰ In other words, he represented a bottleneck in production, and the earliest attempts to mechanize the industry

⁹"Brick Making," Scientific American (November 27, 1886), 343.

¹⁰Carroll Pursell, "Parallelograms of Perfect Form: Some Early American Brick-Making Machines," Smithsonian Journal of History 3 (Spring 1968), 22-3. Gurcke, 86.

focused on his position. Most of the early-nineteenth-century patent designs for molding machines mimicked the action of the hand molder and usually had some form of "charger" that dumped and pressed clay into a set of revolving molds. By the end of the century a refined version of these "soft mud" machines, the "dry press," had become important for making refractory bricks and shapes. It worked on the same principle, with clay pressed and discharged from molds automatically, but the clay was drier, containing less than 10 percent water and was subjected to higher pressure in the mold.¹¹ (Figs. 2.25-27)

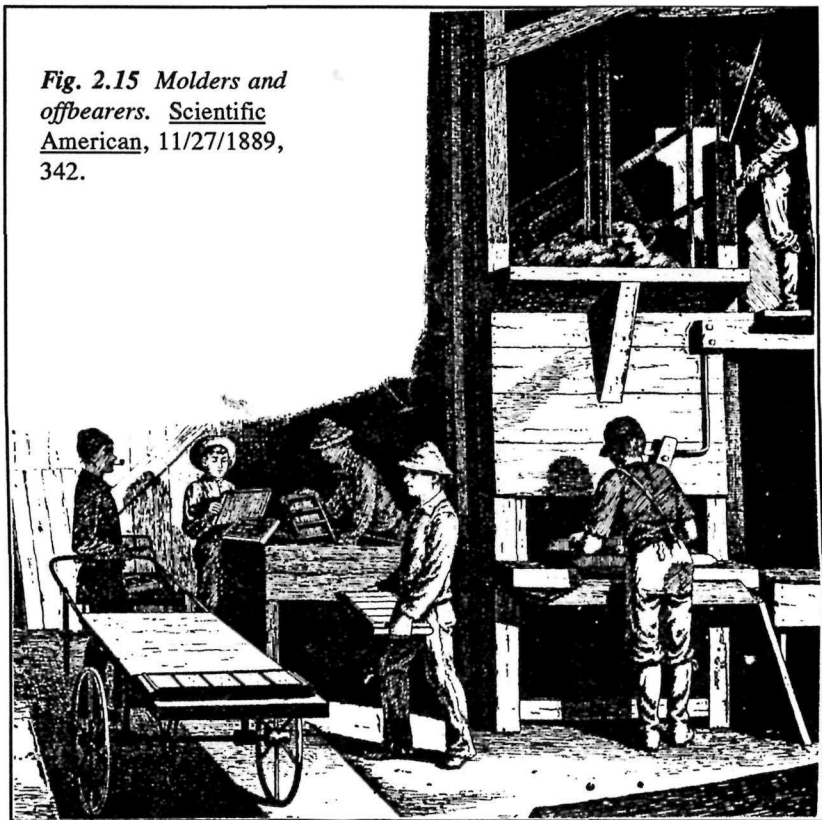
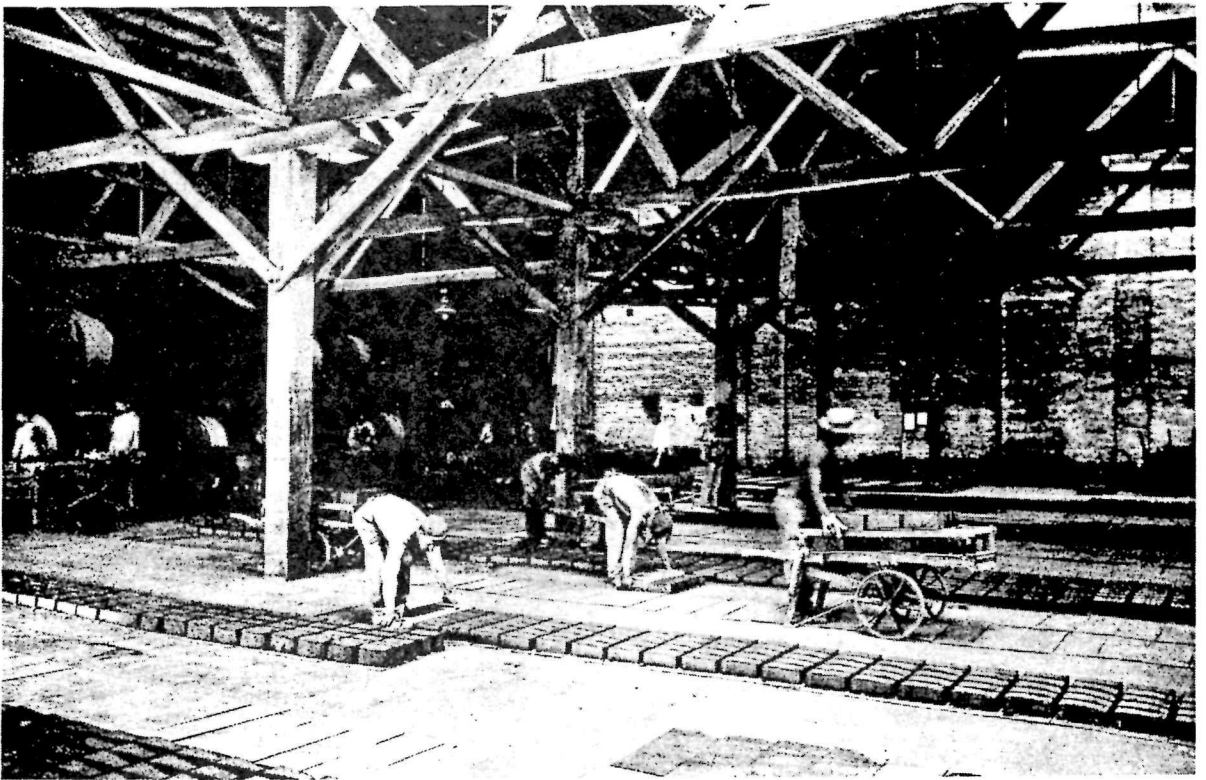


Fig. 2.15 *Molders and offbearers.* Scientific American, 11/27/1889, 342.

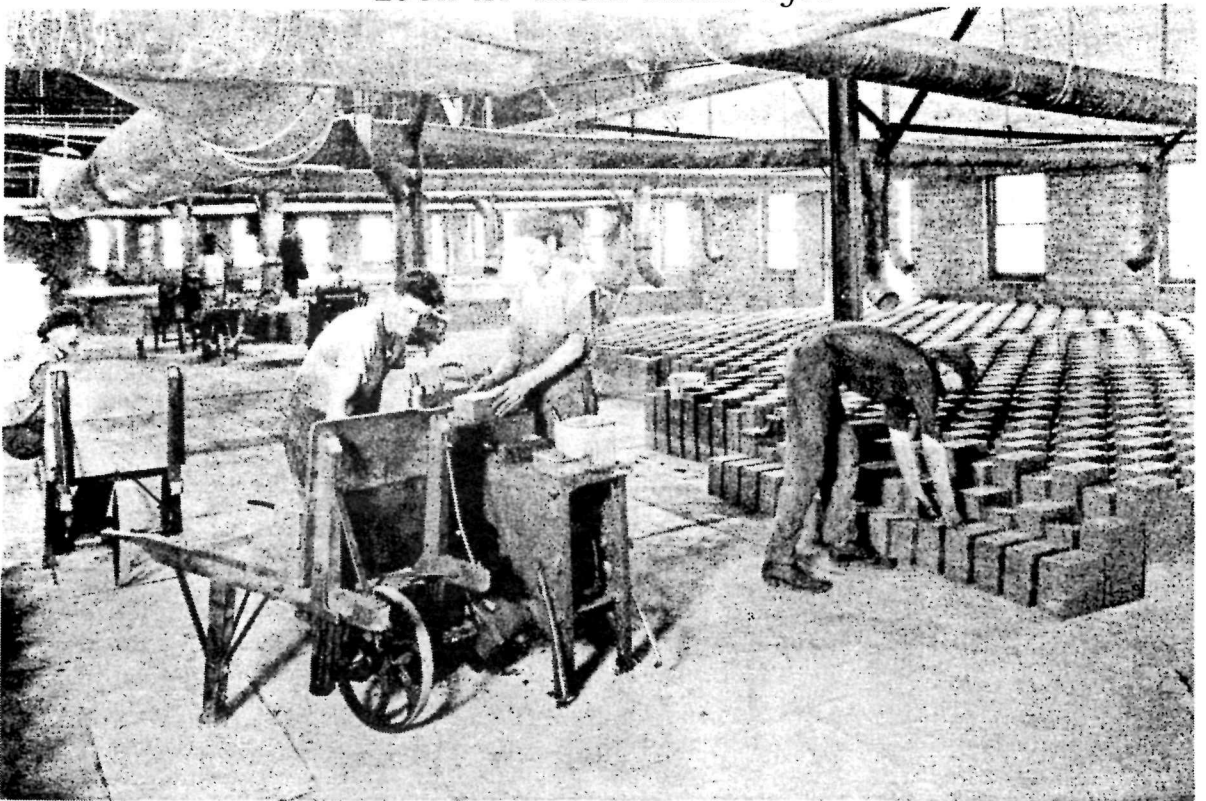


Fig. 2.16 *Brickyarders at Kier Fire Brick Works, Salina, Pa., early twentieth century.* Collection of Leonard Stover.

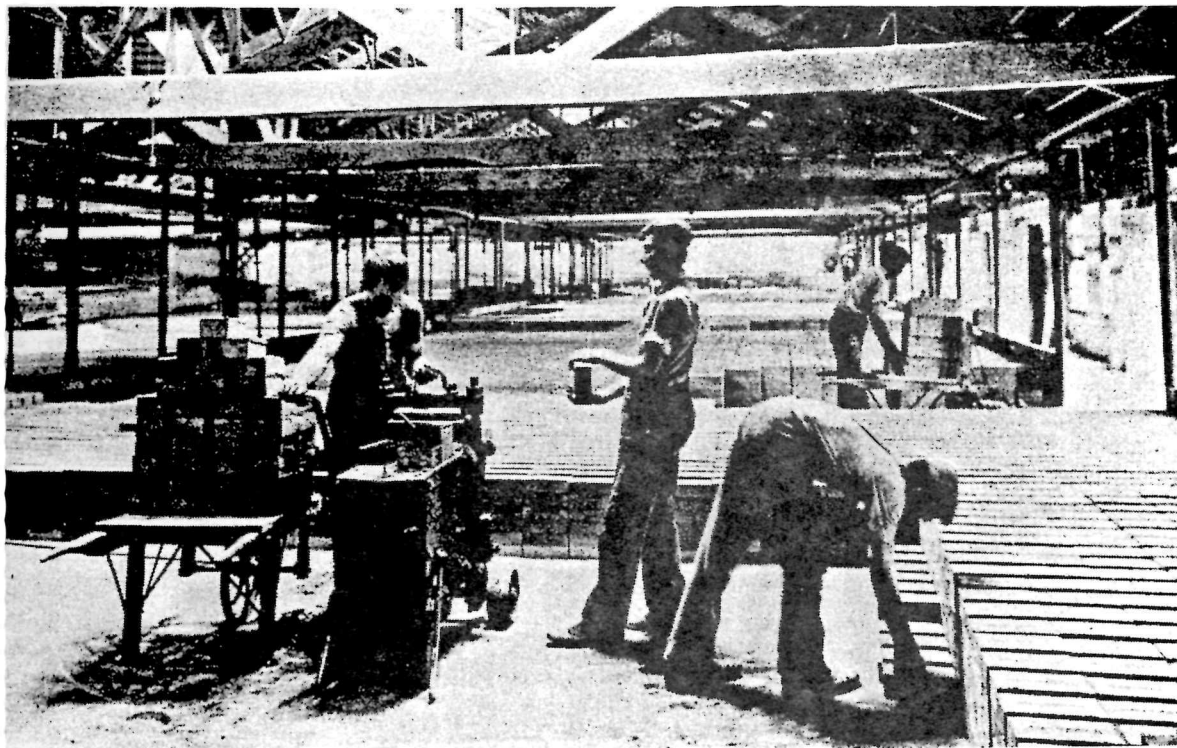
¹¹Pursell, 23. Gurcke, 22. Anderson, 51-52.



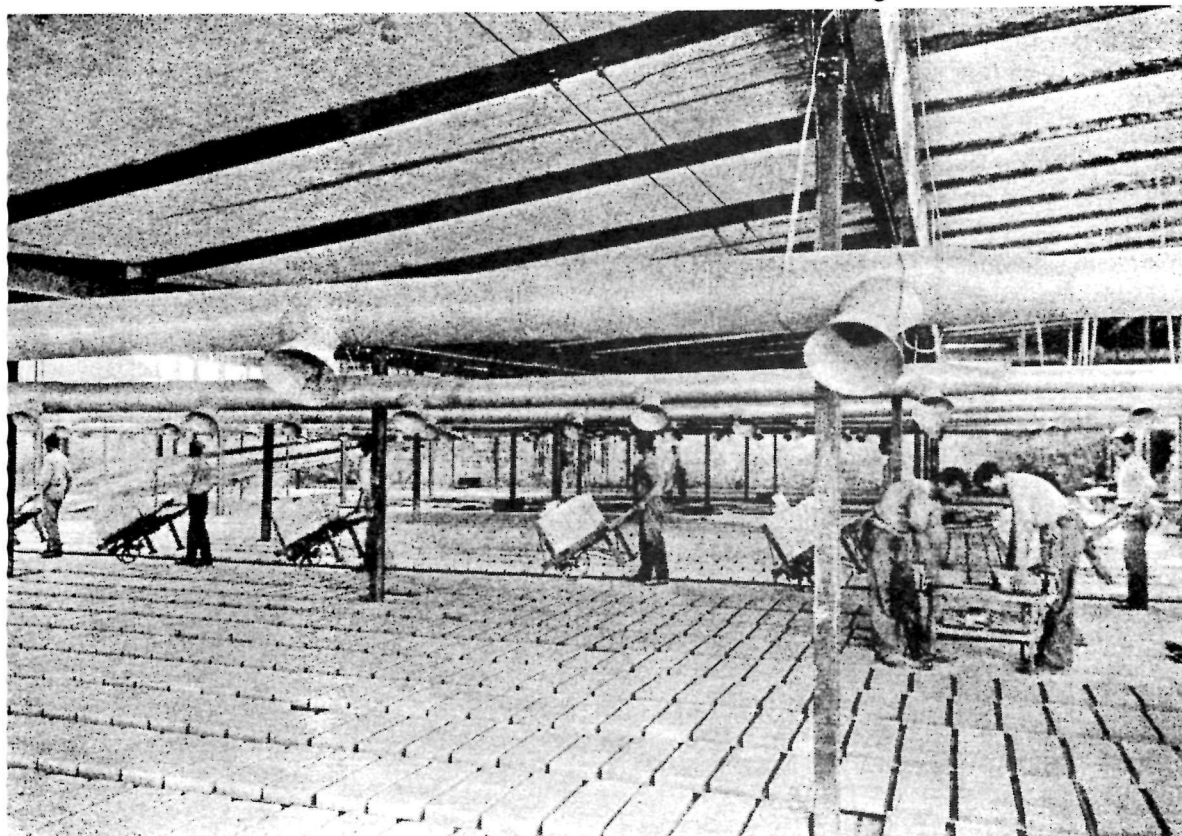
LOOK AT THOSE BACKS-1902



Figs. 2.17-18 Setting, repressing, and restacking green bricks on the hot floor, 1902. MacCloskey, 1952.



ANOTHER VIEW OF THE PRESSER—1902



Figs. 2.19-20 Views of workers on the hot floor, 1902. MacCloskey, 1952.



Fig. 2.21 *Wheelers and kiln firemen in a Pennsylvania brickyard.* Collection of Harbison-Walker Retirees Committee.

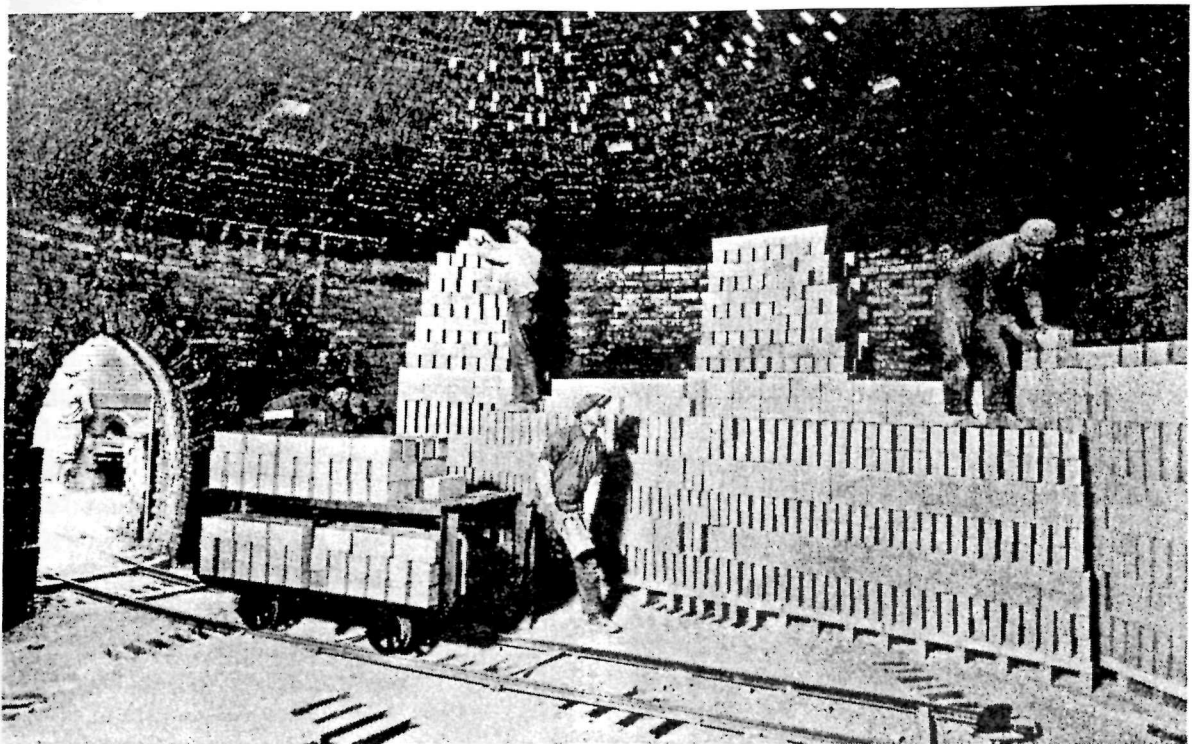
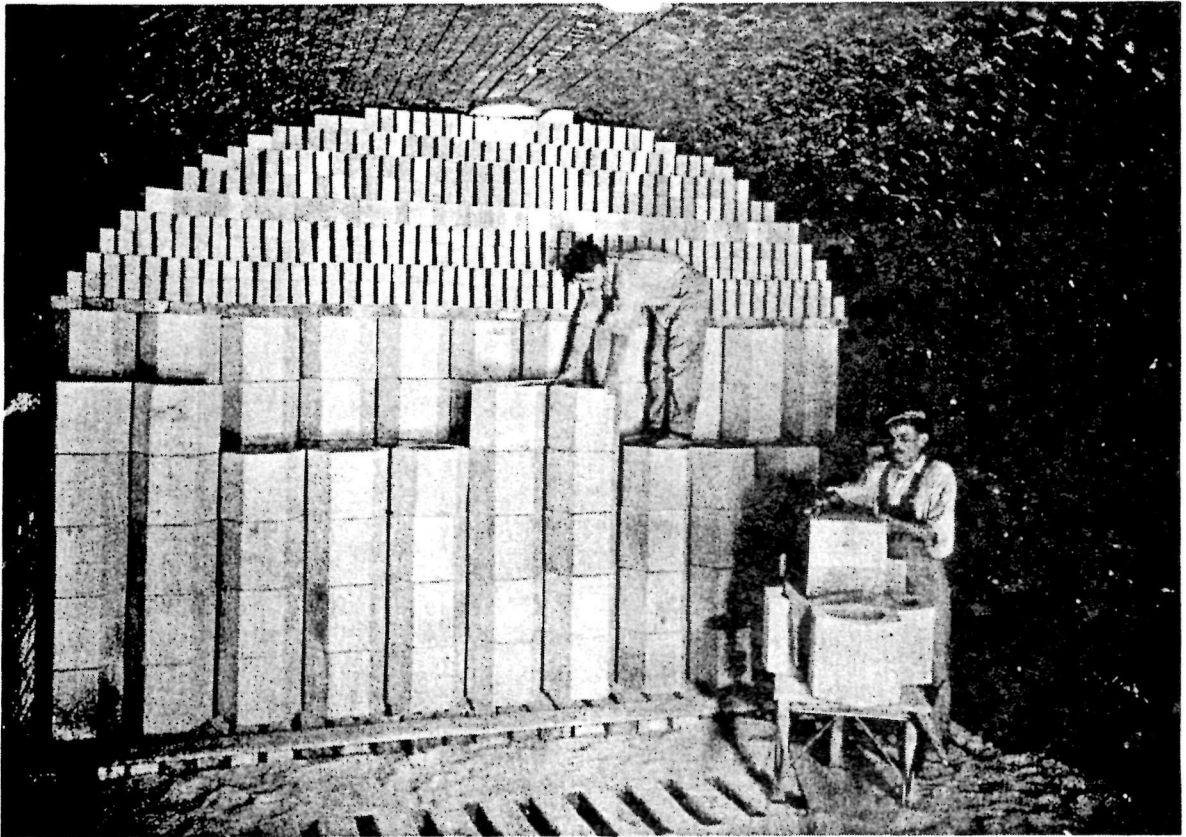
A second machine type exaggerated the action of the hand molder slamming the clay into the mold. In the "drop-mold machine," silica clay was dropped into a mold from a 20-to-30-foot height. The force of the fall compacted it into the form.¹² More important was the "stiff-mud machine" which did not mold bricks but was derived conceptually from the pug mill. Clay was forced through the machine and extruded through a die in a stiff column that was sliced off in brick-sized lengths by rotating wires. Because of the need for high density and precise shape in refractories, these bricks were usually repressed before firing.¹³ (Figs. 2.18-19, 2.28)

The difference in capacity between hand and machine production was dramatic. According to one estimate, a hand molder working in 1898 could turn out 3,000-4,000 bricks each day. A contemporary advertisement for a brick-making machine promised an output of 3,000 bricks each hour.¹⁴ Refractory brick molders were never entirely replaced by machines

¹²Ramsay, 41. James E. MacCloskey, History of Harbison-Walker Refractories Company: From Star to Vega and Beyond (Pittsburgh, 1952), 83.

¹³Gurcke, 21-22.

¹⁴Pursell, 23, 26.



Figs. 2.22-23 Setting bricks and special shapes in kilns, 1902. MacCloskey, 1952.



Fig. 2.24 Packing bricks in a boxcar for shipment. Collection of Harbison-Walker Retirees Committee.

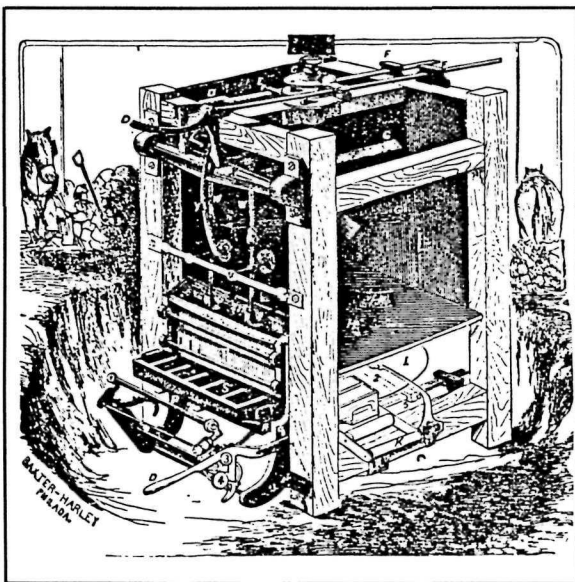


Fig. 2.25 Fire-brick molding machine, ca. 1875.
Catalogue of Machinery, Cohocksink Brick Machine Works, Philadelphia.

because some of the special shapes were too complicated, but their numbers were certainly reduced. (Fig. 2.29)

Between molding and burning, a brick's water content had to be reduced to a minimum. Even green bricks from the dry press contained so much moisture that they would have exploded in the kiln. Drying in the yard could take days and depended on good weather. The interval was shortened and regulated by installing flues under drying floors. These early "hot floors" were fired directly; late-nineteenth-century plants circulated steam heat or waste heat from the kilns. Photographs of early-twentieth-century plant interiors show expansive hot floors with men and boys busy among rows and rows of

bricks and shapes. (Figs. 2.17-20) They worked in a steamy atmosphere over a floor that might have been heated to 100 degrees.¹⁵

By the 1890s machinery manufacturers were urging brick companies to replace their hot floors with tunnel dryers, described as "absolutely necessary to the modern plant." Bricks were loaded on cars that inched through heated tunnels, further regulating and reducing drying time. Attempts to apply the same principle--moving bricks through regulated heat increments, although of much higher intensity--to the burning stage were not successful for refractories until the late 1920s.¹⁶ When plants risked the investment expense of installing tunnel kilns, burning time was reduced from a few weeks to a few hours.

The uninterrupted flow through the plant represented by tunnel dryers and kilns was an ideal that, in practice, was rarely achieved. It was hard to get around the fact that bricks had to be handled individually as they were taken from hand molds or press machines and moved through the subsequent stages. On the hot floor they were constantly shifted and rearranged as they were turned, repressed, "hacked" in short stacks, and finally loaded and wheeled to rectangular or dome-shaped kilns where they were stacked in dense, intricate order. This labor-

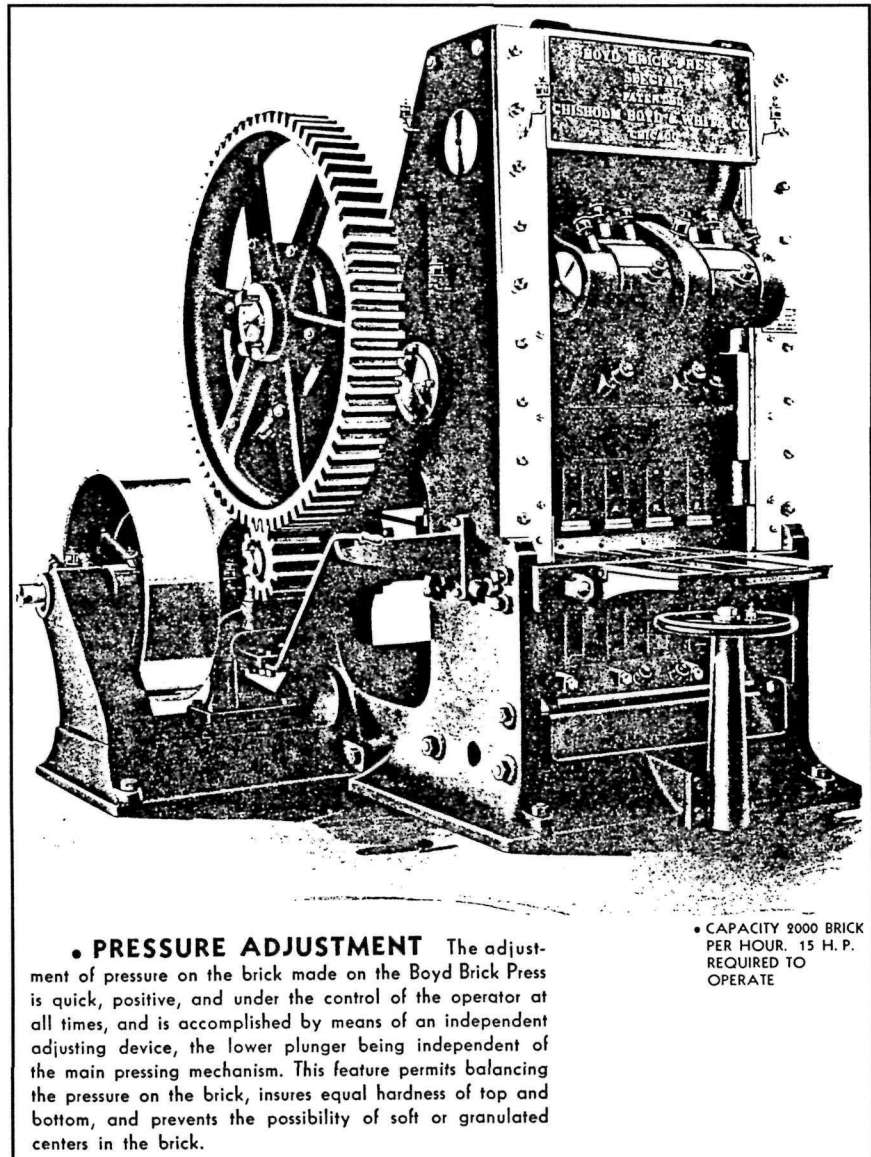


Fig. 2.26 Dry brick press, ca. 1933. *The Boyd Brick Press catalogue.*

¹⁵Anderson, 52. MacCloskey, 79.

¹⁶"A Practical Brick Drier," *Clay Record* 3 (August 16, 1893). MacCloskey 81-82. John D. Ramsay, *Refractories: The Backbone of Industry* (Cleveland: North American Refractories Company, 1941), 36-37. Gurdke, 26, 34.

intensity challenged the ingenuity of engineers and owners at the turn of the century. They were determined to modernize and streamline production. Brick manufacturer J. Parker B. Fiske spoke for many of his peers in the Transactions of the American Ceramic Society in 1903:

This is the age of machinery--automatic machinery, often with the most intricate mechanism, which works with marvelous speed and accuracy, and which accomplishes tasks far beyond the capability of the human hand, both in quality and quantity of product manufactured. As a result of such machinery, the cost of nearly all manufactured articles has been enormously reduced and the consumption by the people correspondingly increased.¹⁷

Fiske was frustrated that his industry was so behind the times and so dependent on its workers; "an excessive proportion of the entire cost of brick making today is in the labor item."¹⁸

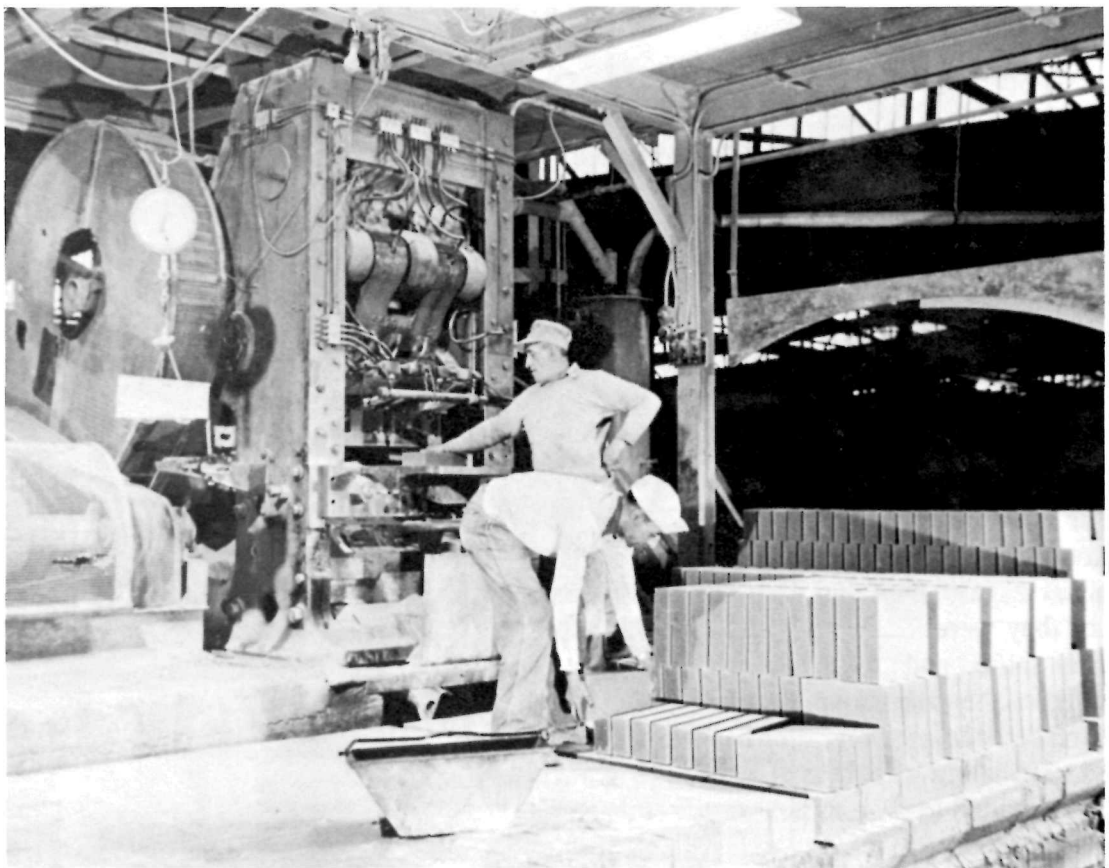


Fig. 2.27 Taking green bricks from the brick press. Collection of Harbison-Walker Retirees Committee.

¹⁷J. Parker B. Fiske, "The Elimination of Hand Labor in Brick Making," Transactions of the American Ceramic Society 5 (1903), 21.

¹⁸Fiske, 22.

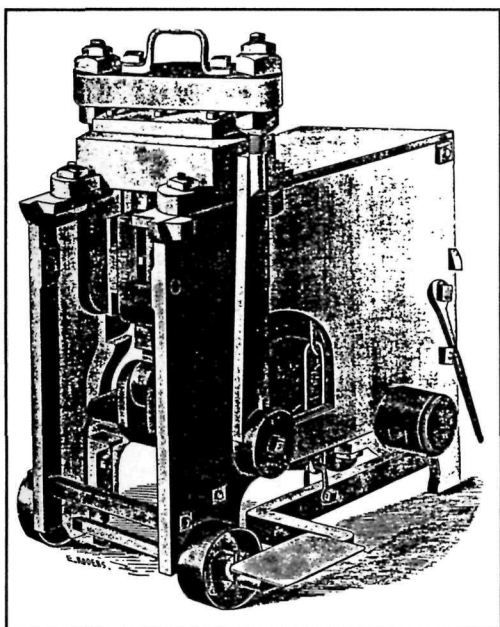


Fig. 2.28 Hand operated repressing machine, ca. 1875. *Catalogue of Machinery*, Cohocksink Brick Machine Works, Philadelphia.

Although "much ingenious and useful brick machinery" had already been invented and implemented, Fiske continued, it usually pertained only to preparing clay or forming bricks. He proposed extending the use of machinery "with a view to the practical elimination of hand labor" which constituted "an expensive proportion of the entire cost of brick making." His goal was a virtually automatic plant-- "raw material would enter at one end, proceed systematically through the various processes and emerge a finished product at the other." To achieve such "radical improvements," Fiske wrote, the overall design of the entire plant had to be rethought:

[The] 'open yard' idea must be abandoned and a permanent, substantial construction must be adopted, with the best possible

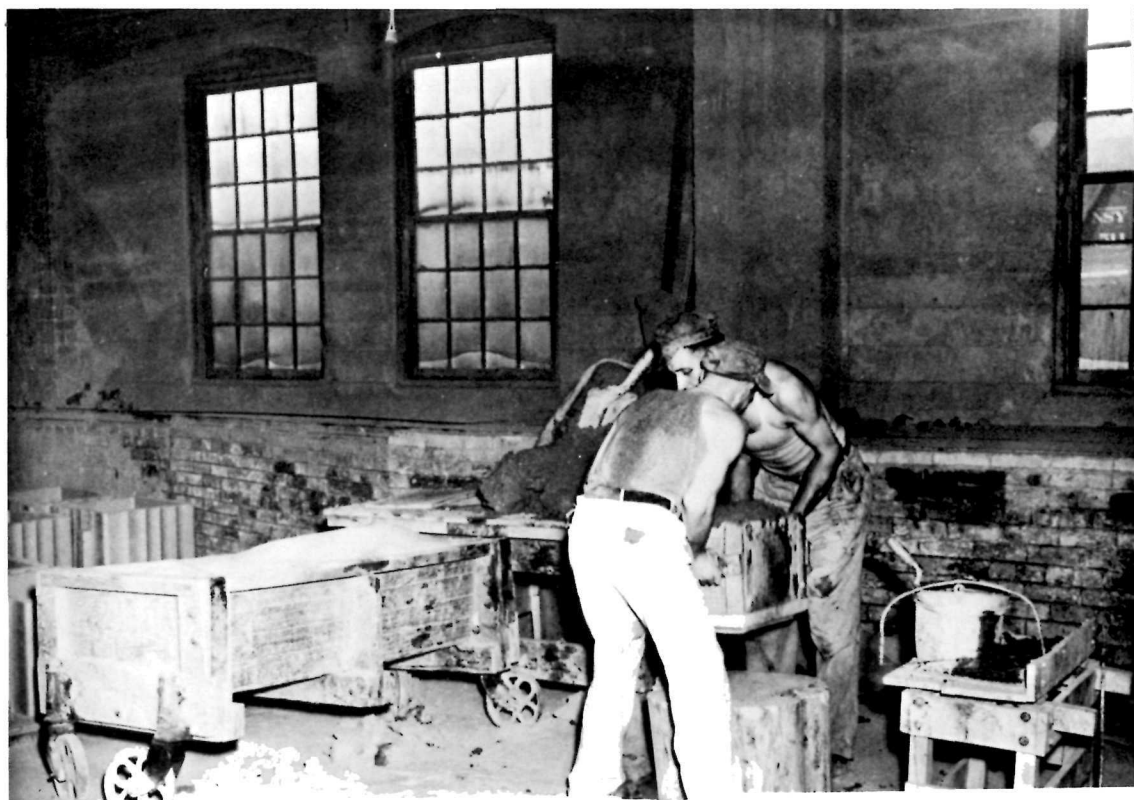


Fig. 2.29 Two molders at Swank's Refractories in Johnstown molding special shapes, ca. 1940. Collection of Johnstown Area Heritage Ass'n Archives.

form of brick molding machinery, artificial driers and fuel saving kilns, specially constructed to suit the new conditions involved in the use of automatic handling machinery, the whole plant representing a comprehensive scheme complete in all its arrangements.¹⁹

Fiske's solution to the hand labor "problem" was to install a rolling overhead crane that carried a platform of stacked bricks from the molding machines to open-topped driers and kilns to shipping dock. Bricks were handled once when they came off the press and once after burning. He reported that the system was proving successful in his own plant, but his peers were skeptical that the long-term results would encourage others to take the risk of reorganizing existing plants and making such a large-scale capital investment.²⁰ His crane-dependent system was never adopted as an industry-wide model, but it contained some elements of the rationalization that did take place. By 1930 a few plants found a practical way to realize the basic idea of reducing hand labor by loading bricks from the presses directly onto a platform that traveled through each step in production. (Fig. 2.30-31) Rather than use a crane, bricks were loaded on cars that moved slowly into tunnel dryers, then through tunnel kilns to a storage area.²¹

The "tow motor" or forklift was arguably the most significant piece of machinery introduced in twentieth-century brickyards. (Figs. 2.32-33) It replaced much of both hand loading and wheelbarrow work. In plants equipped with moving cars and tunnel kilns, it allowed the system to be expanded to all areas of the plant, beyond the route of the car tracks. For plants still using periodic rather than tunnel kilns, the tow motor was perhaps even more important, because it allowed a substitute mechanization suited to the more cramped spaces of older yards. By the time tow motors were widely available in the 1950s, unions were established in most plants, and this labor-reducing machine met with some organized opposition. Acceptance was negotiated through union-industry arbitration and it became an essential component of plant operations.²²

The tow motor allowed the next innovation--"palletization," a rather pretentious name for stacking bricks on pallets that indicates the importance of the practice and the ascendance of scientific management and language. Palletization was so rationalized that companies distributed diagrams of how different brick types should be stacked most efficiently. (Fig. 2.34) The practice not only allowed refractories companies to continue reducing their work force, it allowed their customers to do the same. After bricks were shipped on pallets, receiving, storing, and moving them required fewer men. One steel mill reported that after reorganizing its refractories

¹⁹Fiske, 21, 23.

²⁰Fiske, 35-49.

²¹B. E. Whitesell, "A Tunnel Kiln Refractories Plant," preprinted for use at annual meeting of the American Ceramic Society, Chicago, Ill., February 1929. Leonard Stover, interview by author, Salina, Pa., June 29, 1991.

²²Corinne Azen Krause, *The Hidden Industry: A History of Refractories in the United States, 1860 to 1985* (Pittsburgh: American Ceramic Society, 1987), 118.

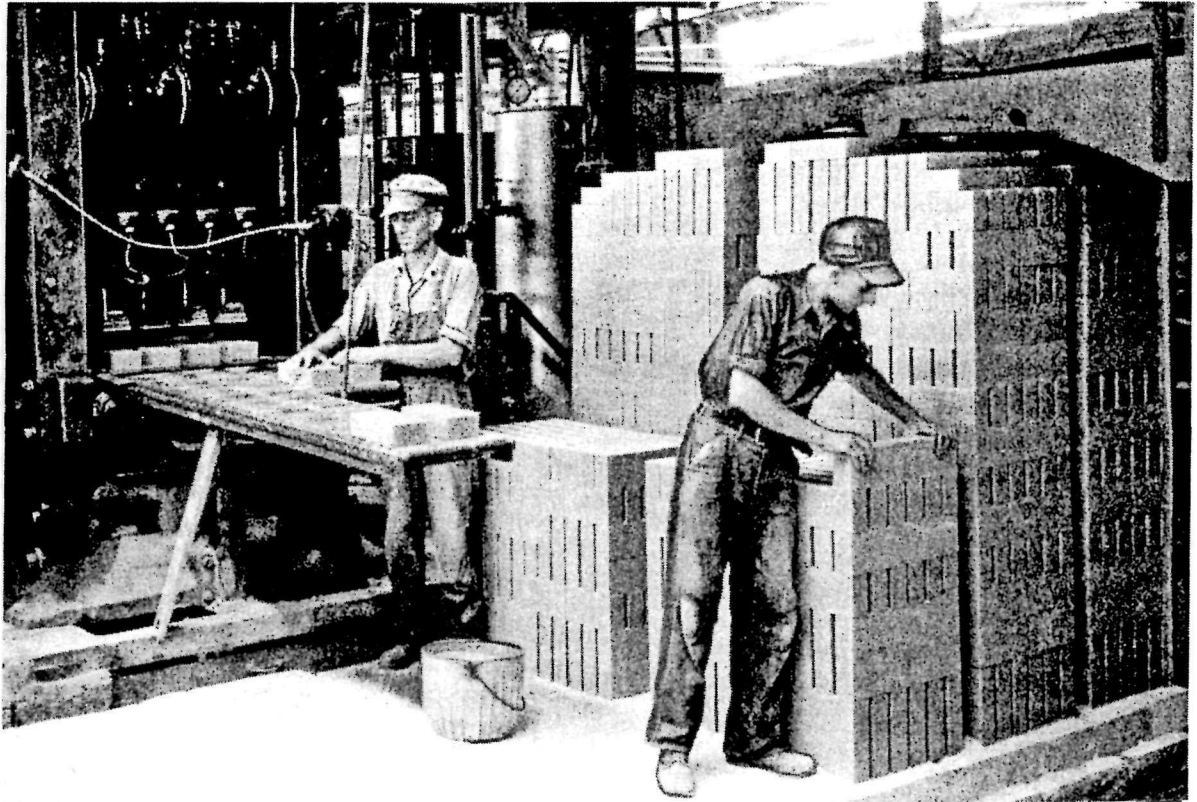


Fig. 2.30 Loading green bricks for the tunnel kiln. MacCloskey, 1952.

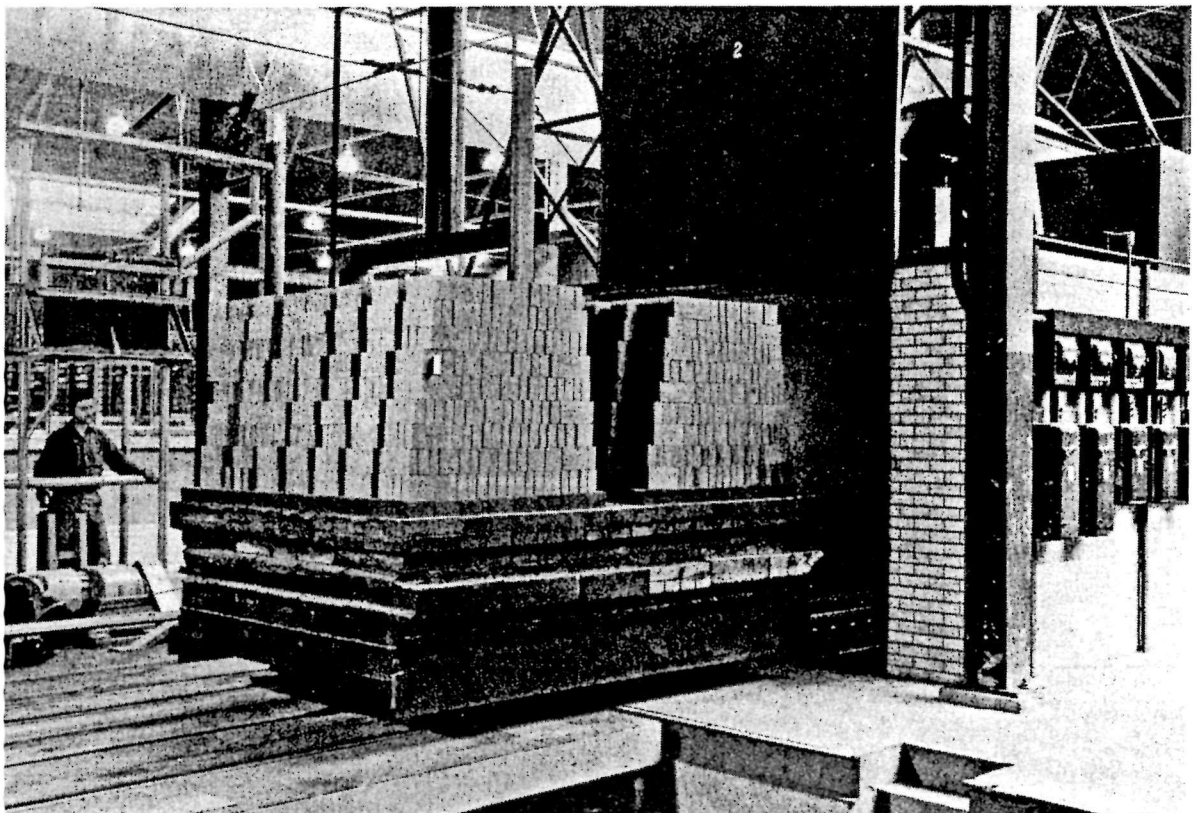


Fig. 2.31 Loaded kiln cars entering tunnel kiln. MacCloskey, 1952.

warehouse to accommodate pallets and forklifts, the warehouse staff was reduced from fifty-six to four.²³

This course of mechanization was uneven and occurred relatively late. Although brick-making machines were available in the nineteenth century, they were not widely used until after 1900. Even then there was a reluctance among customers to accept machine-made brick. It was an unknown quantity and therefore a risk to production. Some believed that the imperfect finish of hand-molded bricks made them adhere better and form a more impermeable barrier in furnace heat.²⁴ Later the opposite belief became accepted knowledge. Perfectly straight edges were sought for a seamless lining, and brick sizes and compositions were standardized across the industry. The most commonly used "9-inch straight" was established as the base brick.²⁵ (Fig. 2.35)

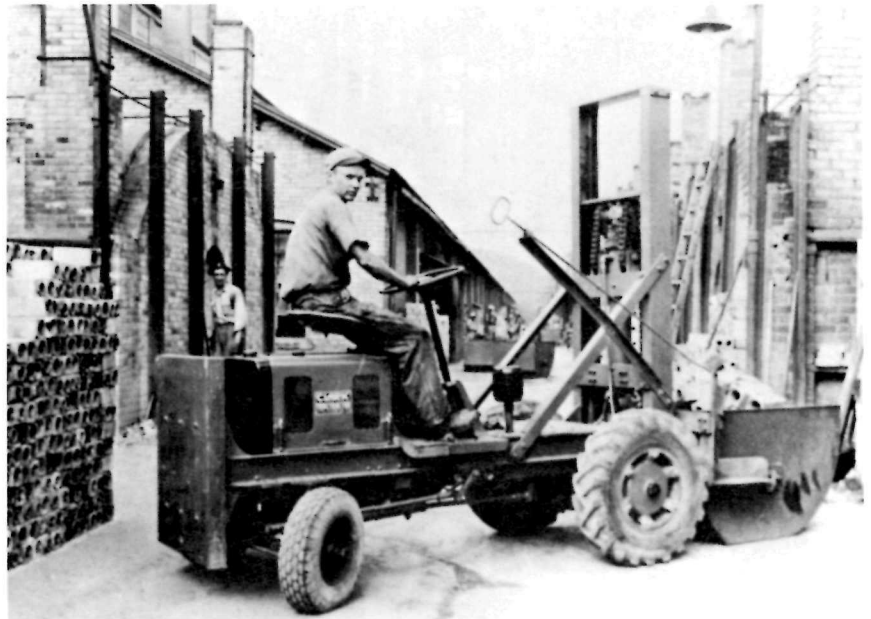


Fig. 2.32 Moving bricks between kilns at Swank Refractories in Irvona, Pa. Collection of Johnstown Area Heritage Ass'n Archives.



Fig. 2.33 A forklift operator and truck driver load bricks at Swank Refractories in Johnstown. Collection of Johnstown Area Heritage Ass'n Archives.

²³Ibid.

²⁴MacCloskey, 82. Ramsay, 99.

²⁵Ramsay 51-52.

The standardization of brick size also affected brickyard work which was divided between jobs that involved brick handling--paid on a piecework basis of so much for every thousand bricks handled--and all other jobs--paid by the day or shift. Piecework rates and the volume of all brick sizes and shapes were measured in terms of their "9-inch equivalent." Even though the rates were designed to compensate for the ease or difficulty of handling different sizes and awkward shapes, retired Salina brickyarder Robert Ripple explained that workers preferred to work on runs of "splits," thin bricks, because they could pick up several at a time in each hand and finish set tasks faster. Piecework rates and "tasks," or the minimum 1,000-lots that could be handled each shift, were originally set by the company. After unionization in the late 1930s and 40s, the numbers were negotiated and assignments were rotated so that easier and more difficult bricks were distributed evenly. In these later years, one of the aspects of brickyard work veterans noted most often was the option to leave work when a task was completed. Working according to the union-set standards, brick handlers could often "make their day" in six hours.²⁶

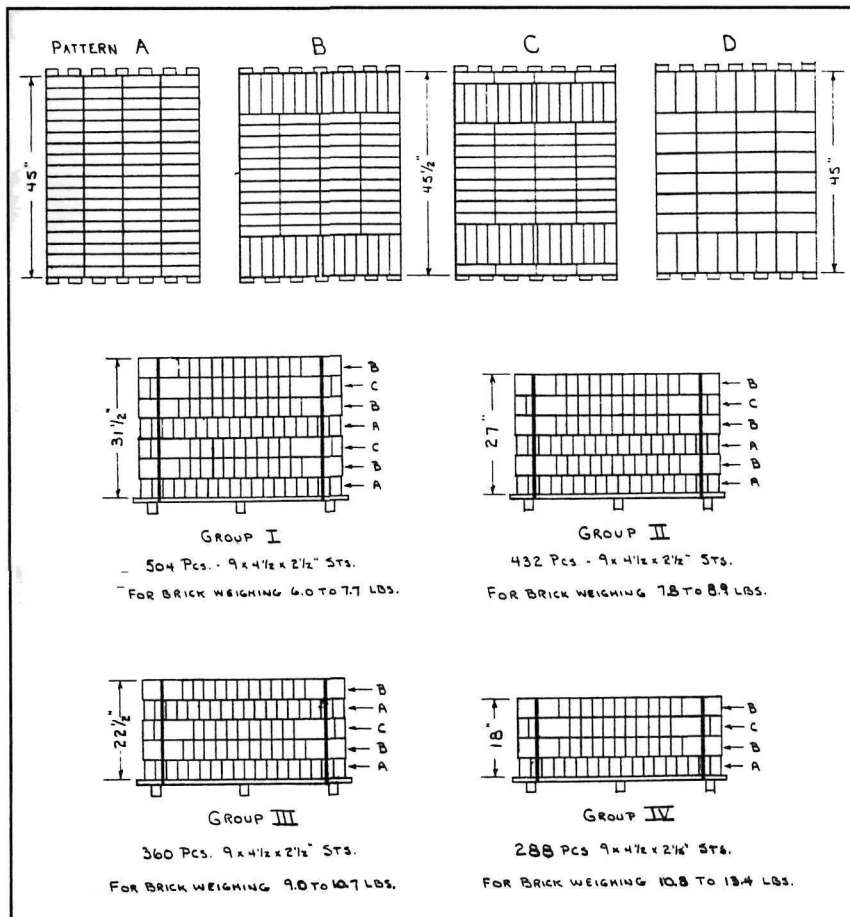


Fig. 2.34 Diagram for stacking bricks on pallets. Gaston LeBlanc papers, Archives of Industrial Society, Univ. of Pittsburgh.

Dependence on hand labor persisted because the cost of investing in machine-centered production combined with initial prejudice against machine bricks to delay full-scale mechanization. The difficulty of reproducing some of the complicated shapes by machine insured that hand molding would never be completely eliminated. Robert Wagner, an engineer for Harbison-Walker, estimated that 70-75 percent of bricks were still hand molded when he started work at the Mt. Union yard in 1942. By the time he retired, the percentage had shrunk to 5 percent. Carl C. Muffley, superintendent at General Refractories in Salina, said they began to phase out

²⁶Robert and Lula Ripple, interview by author, Salina, Pa., May 16, 1991. Paul MacDonald, interview by author, Sproul, Pa., June 9, 1991.

hand molding in the 1950s but "found out [it] wasn't so easy to replace."²⁷ The care needed in handling special shapes also meant that many plants kept hot floors even after driers were installed.

Hand labor and wheeling remained hallmarks of brickyard work even after cars and tow motors were the main form of in-plant transportation. Robert Ripple went to work at the Salina brickyard in 1936. He was assigned to wheelbarrow work and remembered it as a skilled job because not everyone could learn to balance and maneuver 400 or 500-pound loads of brick. Tow motors reduced the amount of this kind of work, made it easier, and could cut by half crews needed to unload kilns or load boxcars. But brickyarders and their wives still viewed moving bricks as a skilled, strenuous job. Lula Ripple described being impressed with the driver of a tow motor as he nimbly backed and steered amidst the confines of the Salina plant. The Harbison-Walker plant at Mt. Union had one tow motor when Ivan Phillips went to work there in June 1948, and added more in the 1950s. He acknowledged that they reduced the size of work crews, but dismissed the idea that using them was easy. He also testified to the persistence of hand labor when he described the "hand leathers," heavy duty gloves he and his coworkers made for themselves out of old tire tubes because the cloth ones provided by the company were quickly worn through.²⁸

Perhaps the most important exception to full-scale mechanization in the Pennsylvania plants was the continuing reliance on periodic rather than tunnel kilns. Only one of the brickyards in the south-central

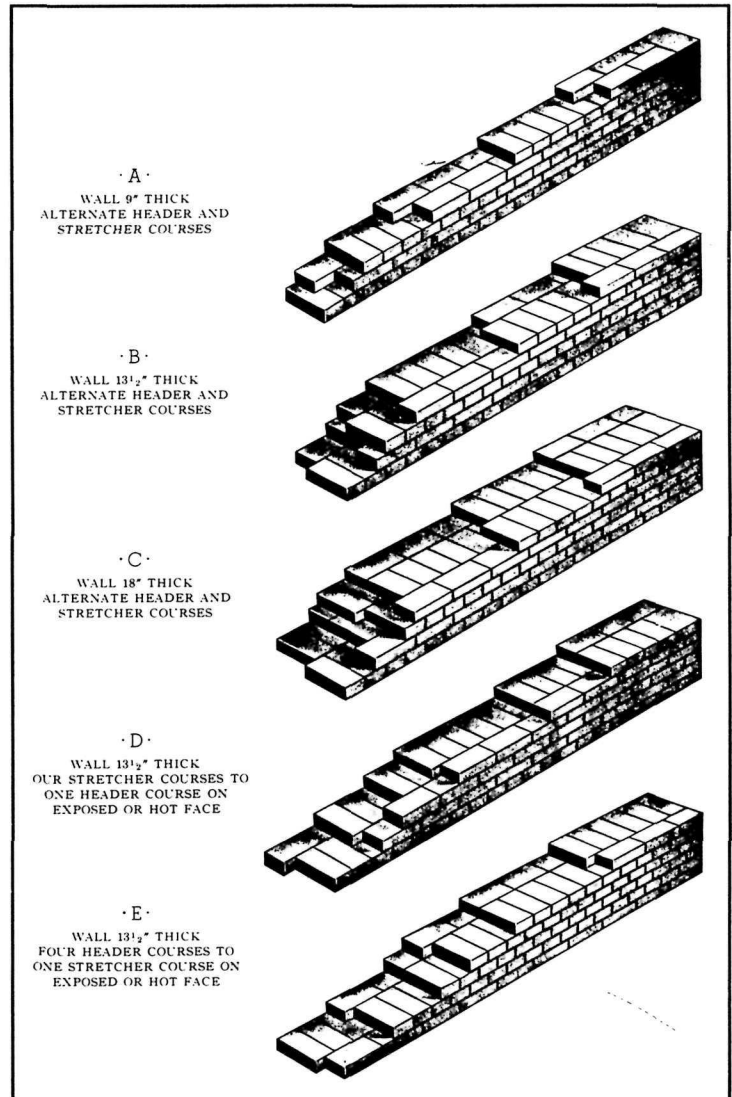


Fig. 2.35 Coursing for walls made with standard 9-inch refractory bricks. *Modern Refractory Practice*, 1937.

²⁷MacCloskey, 82. Robert Wagner, interview by author, Mt. Union, Pa., June 10, 1991. Carl C. Muffley, interview by author, Salina, Pa., June 29, 1991.

²⁸Ripple interview. Ivan Phillips, interview by author, Mt. Union, Pa., June 11, 1991.

Pennsylvania region--Kier Fire Brick at Salina, Westmoreland County--retooled for tunnel firing. Remodeled in 1928, it was one of the first in the industry to make the transition.²⁹ (Figs. 2.31, 3.41, 3.43) Plants equipped with tunnel kilns reported declines in labor and fuel expenses; "firing time and unwanted temperature variation were halved. . . . Workers no longer had to load and unload by hand in 150 [degrees] F temperatures." By the time other plants might have followed Salina's proven example, the depression economy made short-term cost and risk outweigh savings of long-term efficiency.³⁰

Most Pennsylvania plants had twenty-odd beehive kilns. They were substantial structures with thick brick walls girded by iron bands and were often photographed as the representative focal point of the brickyard. (Figs. 2.36-38) The brick setters and firemen who worked in and around them had hot, dirty jobs. As Ivan Phillips noted, 100 degrees was considered cool in the kilns.³¹ Some of the most dramatic brickyard photographs show tossers and setters working in the kilns. Photographs from Hiram Swank's Sons plant near Pittsburgh show small hoists and mechanical arms set up inside kilns to aid in stacking awkward shapes. (Fig. 2.40) Such partial mechanization within the older framework was more typical of Pennsylvania plants than Salina's



Fig. 2.36 View of North American Refractories brick plant, Mt. Union, Pa. Ramsay, 1941.

²⁹Whitesell, "A Tunnel Kiln Refractories Plant," 1929.

³⁰Quoted in Krause, 114. The anticipated expense of high natural gas bills may have been a deterrent to installing tunnel kilns, William Cunningham to author, April 6, 1992. MacCloskey, 83-84.

³¹Phillips interview.

complete renovation. (Fig. 2.41)

A technological change that was pervasive across the region was the switch of fuels from coal to oil and then to natural gas. Both continuous and periodic kilns were modified for this transition. Fireboxes that once kept firemen busy monitoring and shoveling coal were bricked in and replaced with oil and then gas lines. As part of this form of mechanization, the knowledge and skill the kiln fireman used to control kiln temperatures with coal fires was gradually codified and translated into precise scientific language read off gauges and dials.³² Yet, even so, kiln fireman Robert Ripple testified, two gas-fired tunnel kilns could be built next to each other and they would act differently; there was no substitute for an experienced fireman.³³



Fig. 2.37 Women brickyard workers at Swank Refractories in Johnstown during World War II. Collection of Johnstown Area Heritage Ass'n Archives.

Refractories' Composition and Form

At the turn of the century companies cautiously guarded the in-house knowledge and practice involved in making each plant's line of bricks. But in 1912 twenty manufacturers formed a trade association to sponsor industry-wide standardization of refractory forms and sizes as well as scientific testing and research. The new cooperation was justified as more efficient and cost-effective. The American Refractories Institute was formed from this group in 1925. It was based in Pittsburgh and, as one of its services, employed a ceramics engineer who ran a testing laboratory and consulted with refractories consumers and producers. (Fig. 2.39) Manufacturers agreed to adopt the precise dimensions of standardized shapes; and standardized tests for load, spalling or flaking, slag and abrasion were developed to measure refractories' resistance under different conditions. To adhere to the standards and establish competitiveness on

³²MacCloskey, 85. Stover, Phillips, and Wagner interviews. According to Wagner, at Harbison-Walker in Mt. Union, the initial shift from coal to oil was prompted by a strike of the United Mine Workers and the scarcity of coal.

³³Ripple interview.



Fig. 2.38 Brickyard workers posing in front of a beehive kiln, Pennsylvania brickyard. Collection of Harbison-Walker Retirees Committee.

the new grounds, individual companies and plants began hiring ceramics engineers and establishing their own laboratories.³⁴

Standardization of brick chemistry facilitated mechanization of brick making, and like mechanization, it gradually reduced companies' dependence on the accumulated knowledge and experience of individual workers. By the 1940s the role of the college-educated ceramics engineer was well-established but continued to be a source of tension with veteran brickyarders who had first-hand knowledge of the entire brick-making process and made judgments based on sense of touch and sense of the overall operation.³⁵

The need for an "expert" on refractories' content and performance grew in part from their increasing complexity and variety. In the nineteenth century firebrick was categorized in three general grades depending on the proportion of basic ingredients and on whether its specialty was

³⁴Standard Shapes in Fire Clay Brick and Silica Brick as Manufactured by Harbison-Walker Refractories Company, Pittsburgh, adopted July 29, 1913 by the members of the Refractories Manufacturers Association, revised to July 25, 1919, 2-3. Ramsay, 43-57. MacCloskey, 93-95.

³⁵George R. Walker, "Human Relationships and Brickmaking: A Sociological Analysis of a One-Industry Community," (Ph.D. diss., University of Pittsburgh, 1953), 108. Ripple interview. Stover interview.

in resistance to higher or lower heat, spalling, or abrasion. As industrial processes changed and became more complex so did the demand for refractories. Within the industry there was an ongoing effort to improve the general refractoriness and particularly to raise the fusion or melting point of high grade brick.³⁶ Although things such as density, porosity, and firing temperature could be manipulated, the most significant improvements came from changing the brick's basic composition.

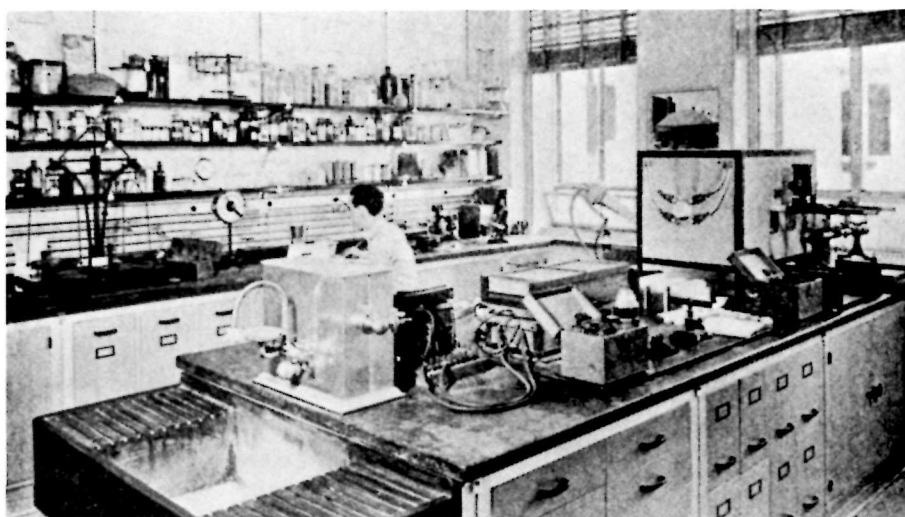


Fig. 2.39 Laboratory at the American Refractories Institute, Pittsburgh, Pa. Ramsay, 1941.

Small-scale manufacturers in Wales in the early nineteenth century discovered that silica sand had superior refractory qualities in comparison to ordinary fire clay. The secret of making the sand adhere in a brick form with lime was brought to the United States in the 1880s. Raw material in the form of ganister, a highly siliceous rock, was found concentrated in the central Pennsylvania counties of Blair and Huntingdon, and the area became a center for silica brick production. Silica brick was a major component in blast furnaces, open-hearth steel furnaces, glass furnaces and flattening ovens, and the batteries of by-product coke ovens built after 1900.³⁷

Even though the process for making silica bricks was the same as for fire-clay bricks, they were always produced at separate facilities because ganister required heavier crushing and grinding machinery than fire clay, and the different chemical composition required different treatment through molding, drying, and burning. Brickyards like those at Mt. Union, Sproul, and Claysburg were built specifically to make silica refractories.³⁸ Work in silica brickyards was much the same in kind, but it was more hazardous because workers were exposed to a much higher concentration of silica dust which caused silicosis, a debilitating lung disease. Silicosis

³⁶Krause, 64-66. Ramsay, 44.

³⁷Rhys Jenkins, "The Silica Brick and Its Inventor, William Weston Young," *Transactions, The Newcomen Society for the History of Engineering Technology* 22 (1941-42), 141. Thomas N. Kurtz, "History of Silica Brick," *Bulletin of the American Ceramic Society* 11 (February 1932), 26. Krause, 69-72.

³⁸Nancy S. Shedd, *Huntingdon County, Pennsylvania: An Inventory of Historic Engineering and Industrial Sites* (Washington, D.C.: HABS/HAER Division, National Park Service, 1991), 17-18. MacCloskey, 82-83.

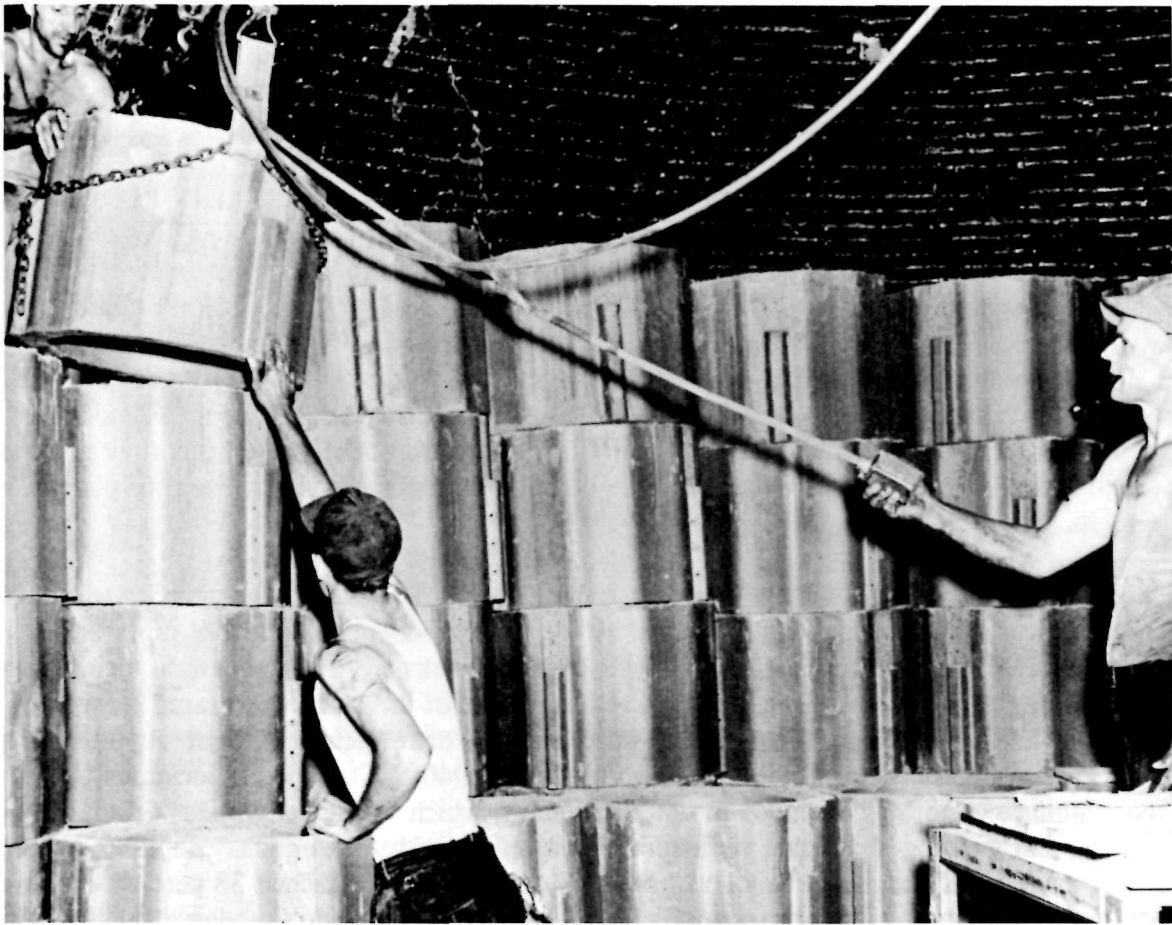


Fig. 2.40 Stacking special shapes in the kiln with an electric hoist, Swank Refractories, Large, Pa. Collection of Johnstown Area Heritage Ass'n Archives.

was also not uncommon among fire-clay brickyard workers because silica is an element of all clays. Workers in crushing and grinding and shipping areas were at higher risk than those in areas where the clay and bricks were damp and there was less dust in the air.³⁹

The departure from the use of simple fire clay as the primary raw material in refractories is indicated in the changing frameworks of categorization. In the late-nineteenth-century refractories were described as either clay or nonclay, and the most important division was between fire-clay and silica bricks. As new refractories were developed, however, chemical specificity became more important. "Basic" refractories, composed primarily of magnesite, sometimes of chrome, were developed in the 1880s for use in the open-hearth furnace where slag of "basic" chemical composition would have eroded silica bricks. Some magnesite deposits were found in California and Washington, but most of the supply was imported. Basic brickyards

³⁹Fulton et al., *A Study of Silicosis in the Silica Brick Industry*, 59. Ripple interview. Phillips interview. Ruth Defibaugh, interview by author, Sproul, Pa., September 25, 1991. David Rosner's and Gerald Markowitz's *Deadly Dust: Silicosis and the Politics of Occupational Disease in Twentieth-Century America* (Princeton, N.J.: Princeton University Press, 1991) is an excellent historical study of silicosis, but it does not deal with brickyard workers.

were built near the domestic source or at a major port like Harbison-Walker's Baltimore works.⁴⁰ With basic bricks added to the list of refractories, fire-clay and silica bricks were no longer seen as the two categories dominating the field, but were linked together as "acid" in distinction from "basic" refractories.

At the beginning of the century, fire-clay and silica bricks, the specialty of Pennsylvania brickyards, made up the bulk of construction of the open-hearth furnace. In 1923, it was estimated that thirty-five pounds of refractories were required in the production of one ton of steel: fire-clay and silica bricks made up thirty-three pounds of the total, and basic bricks two pounds. In the 1940s basic bricks began to be used for furnace ends and sidewalls, and after 1957, when a way of constructing the roof of the furnace with basic bricks was devised, the proportions changed dramatically. Basic brick's higher quality lessened the total amount of refractories required from thirty-five to twenty pounds per ton of steel. Of this figure, ten to twelve pounds were basic brick, three to five pounds were silica, and three to four pounds were fire clay.⁴¹

After World War II, there were additional developments in the composition and form of refractories further edging out fire clay and silica. A third **chemical** category of "special refractories," classified as neither acid nor basic, was developed for new manufacturing methods in the steel, glass, and aerospace industries. Their share of the market increased from 2.6 percent in 1955 to 17 percent in 1979. A third category of refractories' **form**, supplementing "bricks" and "special shapes," became important after 1940. Unshaped "specialties," or "monolithic refractories," included mortars; castables, which would set without firing; and ramming and gunning mixes that were sprayed into place with "mud guns." In 1940 they made up 5 percent of refractories production. By 1984 the percentage reached 38 percent. As use of basic, special, and monolithic refractories increased over this period, fire clay and silica sales decreased from 45.1 percent in 1955 to 12.4 percent in 1979.⁴²

Post-Industrial Decline

A reversal in demand from the industry's original staples of fire-clay and silica bricks to specialty products and an overall decline in demand for refractories in general typified the industry in the twentieth century⁴³ and led to plant closings in Pennsylvania. The fundamental transformation of both refractories' form and composition from their nineteenth-century origins is symbolic of the larger economic structural and cultural transformation of which the industry was a part. The development of more complex, high technology refractories for high technology industry and the disintegration of the solid brick form to a powdery spray mix fits the models of

⁴⁰Krause, 30, 53, 72-73. MacCloskey, 116.

⁴¹Krause, 141-43.

⁴²Krause, 146, 152, 155-57. Stover interview.

⁴³Krause, 85, 140.



Fig. 2.41 Repairing a beehive kiln at Swank Refractories in Large, Pa., near Pittsburgh. Collection of Johnstown Area Heritage Ass'n Archives.

a postindustrial economy and postmodern culture.⁴⁴

Within the industry, the trend was explained with remarkable consistency from trade publications to managers to brickyard workers to truck drivers. They all agreed that two factors contributed to the industry's decline: the decline of the United States steel industry and refractories' improving quality and changing technology that made many earlier refractory products virtually obsolete.⁴⁵ John D. Ramsay, president of North American Refractories, attributed the decrease in demand to an increase in quality. Refractories simply did not need to be replaced as often. He urged consumers to consider this when they were asked to pay higher prices for smaller orders.⁴⁶ Former superintendents at Salina and Mt. Union cited their exclusive dependence on steel mills as the fatal weakness that led to their plants' closings. An independent truck driver who hauled bricks from the area plants to the steel mills explained that locally produced bricks were replaced by more heat-resistant ones made elsewhere from more exotic raw materials. At the closing of International Refractories in Johnstown in 1990, its

⁴⁴Steven Connor, *Postmodernist Culture: An Introduction to Theories of the Contemporary* (Cambridge, Mass.: Basil Blackwell, 1989). Frederic Jameson, "Postmodernism or the Cultural Logic of Late Capitalism," *New Left Review* 146:53-93.

⁴⁵Ramsay, 84. Wagner interview. Steve Andrews, interview by author, Blandburg, Pa., June 13, 1991. MacDonald interview. Max Wallace, personal communication, Breezewood, Pa., May 1991.

⁴⁶Ramsay, 84.

president commented on the event's significance: "this brings down the curtain on an era in Johnstown. [At] one time [refractory brick making] was one of the prime industries along with steel and coal We're among the last of the dinosaurs."⁴⁷

Paul MacDonald was an employee at General Refractories in Sproul for over forty years and founding president of its UMW local. He attributed the decline of Pennsylvania refractories to both the weakening of the U. S. steel industry and to "modernization," an abstract process that he understood more concretely after a hunting trip when he met a bricklayer from Bethlehem Steel in Johnstown. When they realized their common interest, the bricklayer gave MacDonald a first-hand account of the change in steel furnace construction that affected both their jobs. Instead of shutting down a furnace when its walls deteriorated and rebuilding them brick by brick, the heat was turned down, perhaps from 3,000 to 1,200 degrees, and workers used mud guns to spray a refractory mixture through the flames and reline or patch the walls.⁴⁸ Dependence on refractory bricks and hand labor, once fundamental elements of production, was reduced to a minimum. All the brickyards in south-central Pennsylvania were closed. The one in Sproul was reopened--with a fraction of its original staff--to make refractory mortars and gunning mixes.

* * *

Tracking the consumption of refractories shows a steady, low-level demand from the mid nineteenth century to the 1890s when it rose dramatically to peak about 1926. Machines that increased production were developed in response to this demand, but a fully mechanized plant with machines at each step of brick making was not in operation until 1928 after demand peaked. During this period when mechanization, as traditionally defined, lagged behind demand, brick making remained very labor intensive and companies saw their workers as central to increasing production. Yet, if we broaden our definition of technology to include more than individual or groups of mechanical devices and look beyond the borders of the brickyard proper, it becomes clear that from the 1890s through the 1920s companies employed alternative, extra-mechanical strategies intended to increase production by maintaining a large, stable work force. To expand and take advantage of rising demand, they built company houses and cultivated company towns as extensions of brickyard operations.⁴⁹

⁴⁷Stover, Wagner, and Wallace interviews. According to Wallace, truckers called the refractory bricks they hauled "poverty blocks" because of the low rate they paid in comparison to steel. Ted Zellem, "International Refractories Sets Closing," Johnstown Tribune-Democrat (June 7, 1990).

⁴⁸MacDonald interview.

⁴⁹For partial precedent for this view of company houses, see: Daniel Nelson, Managers and Workers: Origins of the New Factory System in the United States, 1880-1920 (Madison, Wis.: University of Wisconsin Press, 1975), 91, who notes that "the manufacturer viewed the company town as little more than an extension of the factory layout;" and Thomas P. Hughes, American Genesis: A Century of Invention and Technological Enthusiasm, 1870-1970 (New York, Penguin Books, 1989), 3, 5-6, who primarily defines technology as "the means of production" of goods and services and writes that technology should be seen in terms of systems rather than as isolated "hardware, devices, machines and processes."

Chapter 3. *BRICKYARD TOWNS*

Viewed from the perspective of the brickyard, brickyard towns, and particularly their company housing, can be interpreted as a piece of brick-making technology. Demand for refractories increased dramatically at the turn of the century and outpaced development of automated machines. Because brick making remained very labor intensive, refractories companies concentrated on making their workers as cooperative and efficient as possible. Company housing was part of this effort; it was designed to integrate the workforce into the machinery of production.

Building company housing and becoming involved in the town adjacent to the brickyard was an option for all companies, but policies were not consistent, even within the same company, and they were molded by the history and conditions at each brickyard. Each town profiled here illustrates some facet of brickyard town history, and as a group, the towns testify to the complexity of the phenomenon of the company town. (Fig. 1.1) They are presented here in chronological order of the founding of their brickyards. Each section highlights a theme suggested by each town's history and includes descriptions of the company housing and other local examples of brickyard work and life.

The earliest brickyard in south-central Pennsylvania was built at **Bolivar** in the 1840s, and development there represents the refractories industry's early history as brickyards were used as investment options by local and non-resident businessmen who were also involved in other partnerships unrelated to refractories. By the end of the century the Bolivar brickyards were dominated by two local families who specialized in refractories production and who influenced the shape of the town and founded a second, neighboring town of **Robinson**. The brickyard at **Salina** was founded by one of the early Bolivar investors as a family business. It provides the bridge from the industry's nineteenth-century beginnings and business organization to early twentieth-century modernizations in the form of company housing and plant machinery as well as incorporation of the local business into a national organization. The 1903 strike against Harbison-Walker at **Blandburg** represents the often contentious relationship between company and employees, and the strike and the company's subsequent program of community social work are clear examples of the calculated strategies deployed in the management of the company town. In **Mt. Union** and **Kistler** three different brick companies attracted workers who dramatically altered the local demography. Each company built houses for the newcomers, but each developed a very different housing policy. **Sproul** was perhaps the most closed company town of this sampling. Its workers were resistant to unionization, but welcomed it when the company began to abandon paternalistic oversight of the community. When the last brickyard in the region was built at **Claysburg** in 1913, the town more than doubled its geographic extent by additions developed both by the company and by local developers. As the brickyard's business declined, workers feared for their jobs and the future of the town and made a last-ditch effort to adapt the plant to produce new forms of refractories, but their efforts were finally unsuccessful.

Bolivar and Robinson: Nineteenth-Century Brick Manufacturers; Building Companies and Shaping Towns

Garfield Refractories Company, with an office in Bolivar in northeastern Westmoreland County, remained independent of national companies throughout the twentieth century. Its last operating brickyard was in Robinson, across the Conemaugh River in southern Indiana County.

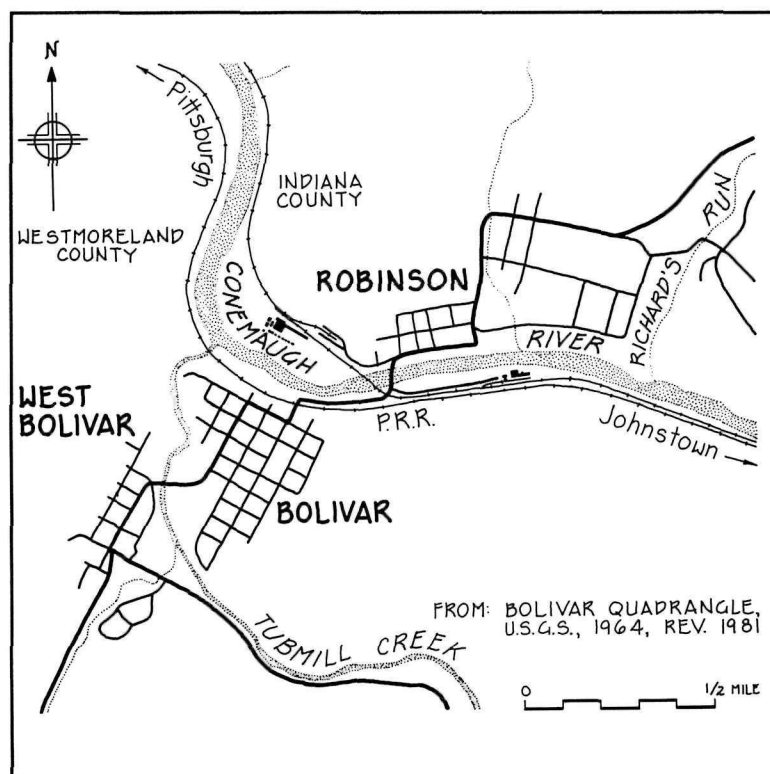


Fig. 3.1 Map showing relationship of Bolivar and Robinson along the Conemaugh River. Drawn by Isabel Yang.

(Fig. 3.1) When it closed in 1979, it was still run by descendants of Elliott Robinson, an area native who opened a brickyard in the 1850s. An abundance of fire clay, coal for firing, and access to transportation made Bolivar and Robinson a prime site for brick making; at least five separate brickyards operated there for many years. The first, sited along the Pennsylvania Mainline Canal at Bolivar in the 1840s, was one of the earliest in the state, apparently predated only by a brickyard in Philadelphia and one at Queen's Run in Clinton County.¹

Because of their place in the early history of the industry, one might expect the development of the Bolivar brickyards to reflect local family initiative and control, while those founded later, in the era of mergers and incorporations,

were more likely to become subsidiary interests of outside investors. In fact, the early history of these brickyards seems to typify the industry and business practices in general during this period in the involvement of a number of changing partnerships whose members were both resident and non-resident.² By the end of the century, joint ownership gave way to control by two local families: the Hammonds lived in Bolivar, the Robinsons in both Bolivar and Robinson.

The village of Bolivar (Fig. 3.2), situated along the Conemaugh River in the mountains of

¹Arthur F. Greaves-Walker, "History of Development of the Refractories Industry in the United States," *Bulletin of the American Ceramic Society* (June 1941), 214. Corinne Azen Krause, *Refractories: The Hidden Industry, A History of Refractories in the United States, 1860-1985* (Pittsburgh: American Ceramic Society, 1987), 6-7.

²Alfred Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, Mass.: Harvard University Press, 1977), 36-37.



Fig. 3.3 Canal-era building, corner 2nd and Washington streets, Bolivar. Photo by Nancy Spiegel.



Fig. 3.4 Canal-era building, 2nd Street, Bolivar. Photo by Nancy Spiegel.

northeastern Westmoreland County, was established in 1829 by canal builders. By 1832 it boasted a store, post office, forge, and twenty houses.³ Several canal-era buildings still stand along the main thoroughfare. (Figs. 3.3-4) Scottish immigrant James Glover is credited with initiating the local firebrick business. He reportedly worked in the Mt. Savage, Md., clay mines before discovering the deposits at Bolivar in 1842. Township tax assessors recorded a brickyard in Fairfield Township in 1846 when Baxter, Glover, Harley and Company were taxed for 250 acres, one sawmill, four horses, and one "fire brick factory." Five years later the partnership was reformulated as Glover and Kier and Company. Samuel M. Kier was a western Pennsylvania entrepreneur who later began a brickworks in Salina. In 1851 he and Glover were operating two "brickworks" at Bolivar

and by 1856 had built fourteen tenant houses for their employees.⁴ In the 1850s Elliott Robinson and C. A. R. Benney opened a third plant; in 1865 Thomas Boyd was proprietor of a fourth. By 1875 James Gardner and Brothers was operating a fifth in the neighboring village of

³Thomas F. Gordon, *A Gazetteer of the State of Pennsylvania* (Philadelphia: T. Belknap, 1832).

⁴"Early Days of Fire-Brick Manufacture," *Clay Record* 25 (September 15, 1904), 28-29. Tax assessment records, Fairfield Township, Westmoreland County.

Lockport.⁵

Because of the number of plant sites and frequently shifting partnerships and name changes it is sometimes unclear which plants failed and which were taken over by new companies. Further confusion arises because the companies' holdings often straddled the Conemaugh River and fell in two counties' and at least three municipalities' tax assessment jurisdictions.

The county atlases for the period provide a slightly different slate of partners than do local histories and tax records, confirming the large number of people who invested in brick making. The 1867 atlas showed James Gardner's brickyard at Lockport as Wilson and Gardner Fire Brick Works and listed two firebrick manufacturers at Bolivar--A. J. Libengood and Boyd, McCartney, and Marrow. The 1876 atlas showed two brickyards in Lockport--one owned by A. Robertson, the other by Hammond and Company. At Bolivar in 1876 there were four brickyards



Fig. 3.5 Three miners working at a clay bank near Bolivar. Clay Record, 9/15/04.

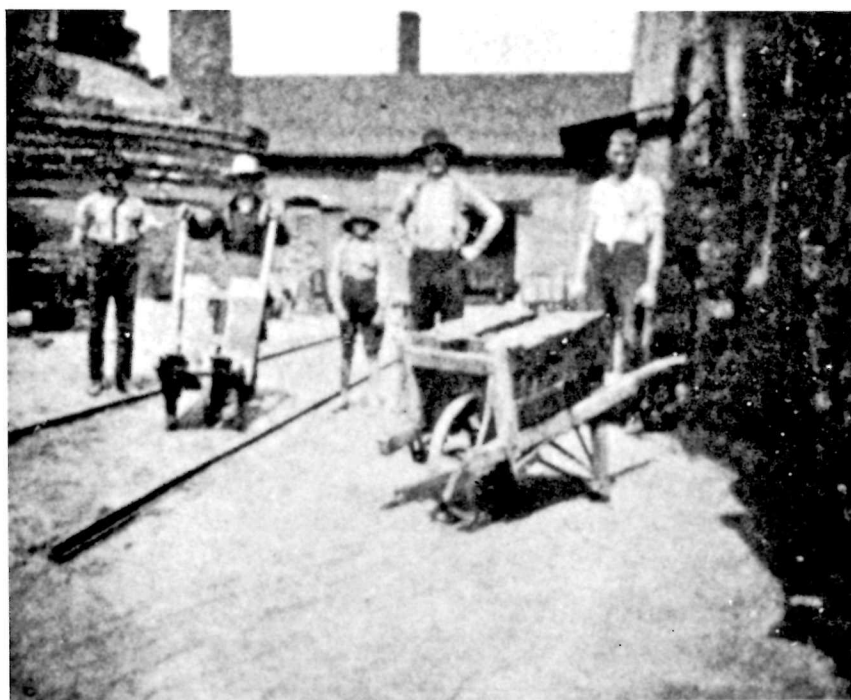


Fig. 3.6 Wheeling bricks at a Bolivar brickyard. Clay Record, 9/15/04.

⁵Tax assessment records, Fairfield Township and Bolivar, Westmoreland County. "Brick Yards" in Cunningham, "History of Bolivar."

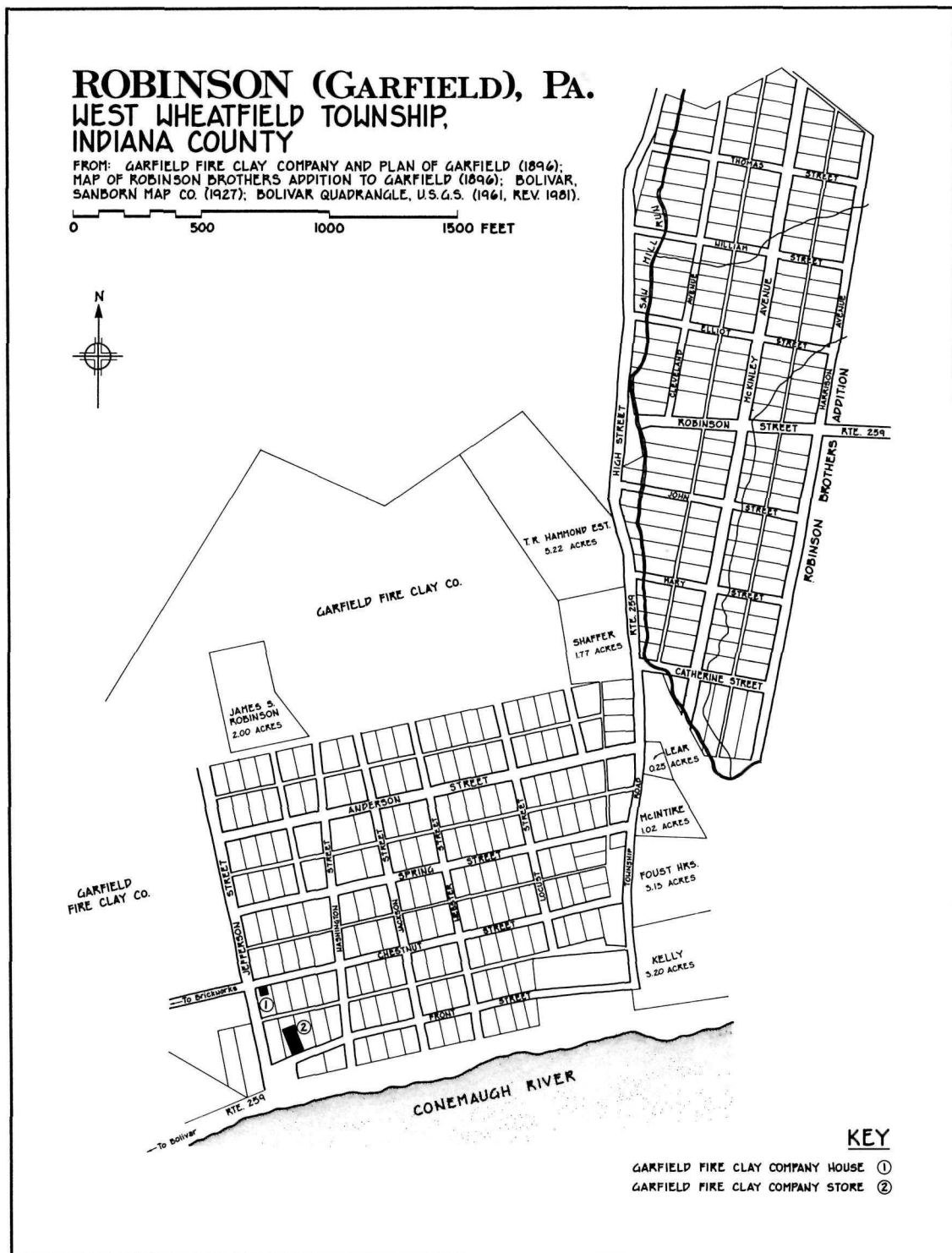


Fig. 3.7 Map of Robinson. Drawn by Isabel Yang.

owned by J. E. McCartney; J. Brenizer and Company; Miller, Coulter, and Dushane; and the Enterprise Manufacturing Company. (Fig. 3.2) The Enterprise Company's yard was taken over by the McFeely Brick Company, based in Latrobe. It maintained the Bolivar property into the



Fig. 3.8 Looking east along Chestnut Street, Robinson. Photo by Kim Wallace.

1930s, extending the role of small-scale local business networks into the twentieth century.⁶

Robinson

Local businessman Elliott Robinson was born in 1808 and lived on his father's farm on the Indiana County side of the river. Like several other brick manufacturers, started his career as proprietor of a boat on the Pennsylvania canal. He was also involved in storekeeping, farming, and lumbering, and owned flour and sawmills in Bolivar and the surrounding township. He made his first venture into brick making with Benney in 1857 and was founding partner in at least three other companies. His last investment, made with his sons in 1887 to found the Garfield Fire Clay Company, outlasted all the other local companies, finally closing as Garfield Refractories in 1979.⁷

Robinson founded a town on part of the family farm in 1880 and named it Garfield after

⁶"Bolivar" and "Lockport" in S. N. and D. G. Beers, *Atlas of Westmoreland County, Pa.* (Philadelphia: A. Pomeroy, 1867); and in F. A. Davis and H. L. Kochersperger, *Illustrated Atlas of Westmoreland County, Pa.* (Reading, Pa.: Reading Publishing House, 1876). Tax assessment records, Bolivar and Fairfield Township, Westmoreland County; West Wheatfield Township, Indiana County.

⁷"History of Robinson," *Blairsville Dispatch* (May 23, 1935). Clarence D. Stephenson, *Indiana County 175th Anniversary History* (Indiana, Pa.: A. G. Halldin Publishing Company, 1989), IV:362-63, III:298-300. "Robinson" and "Brick Yards" in Cunningham, "History of Bolivar."



Fig. 3.9 Looking east along Chestnut Street, Robinson. Photo by Kim Wallace.



Fig. 3.10 Two houses on Washington Street, Bolivar. Photo by Kim Wallace.

the U.S. president elected that year. (Fig. 3.7) The family business was named for the town, and an adjacent brickworks was operating by 1900. When the town was granted a post office in 1902, it was renamed Robinson in honor of its founder who had died a few years before. Although members of the Robinson family did live in Garfield/Robinson, documentary evidence more often places Elliott in Bolivar. He was on the building committee of the Bolivar United Methodist Church in 1856, and both the 1867 and 1876 county atlases show the residence of E. Robinson at the corner of Water and First streets in Bolivar. Indiana County tax records in 1890 listed him as a "gentleman" resident in Bolivar. His son John moved from Tyrone to Robinson about 1898 to help run the company. John's daughter, Mary Godfrey, remembers helping her mother redecorate their new house after the move. She also recalled that because she was a girl she was not allowed to visit the nearby brickyard and that her family later moved to Bolivar so that she and her brothers could go to school in a safer environment.⁸ Although she couldn't elaborate on what made Bolivar "safer," a comparison of the architecture in the two towns suggests that the Robinson family would feel more comfortable in the older, larger town which offered more services and had more well-to-do residents and more established residential gradations along class lines. (Figs. 3.10-11) The office of Garfield Refractories was sometimes located in Bolivar and



Fig. 3.11 House on Washington Street, Bolivar. Photo by Kim Wallace.



Fig. 3.12 Originally a Methodist Church and once the Garfield Refractories Company Office on Washington St., Bolivar. Photo by David Ames.

⁸Ibid. "Bolivar" in Beers (1867) and Davis (1876). Tax assessment records, West Wheatfield Township, Indiana County. Mary Margaret Robinson Godfrey, interview by author, Ligonier, Pa., September 24, 1991.

at other times in Robinson.
(Fig. 3.12)

The town of Robinson was laid out in a rough square with four east-west and five north-south streets, the Conemaugh River on its southern border, and a township road (now state route 259) on the east. It was expanded in 1902 by the "Robinson Brothers Addition," a rectangular plot with one north-south and seven east-west streets, on the east side of the township road. (Fig. 3.7) It was never incorporated and is still administered by West Wheatfield Township.⁹

Although the Robinsons controlled the organization of land and the town's water supply, they seem to have encouraged private ownership of houses. Two double houses owned by the company first appear in township tax records between 1900 and 1905. The company's house inventory peaked at only eleven about 1930; ten were single dwellings, one was a double. In the assessment listing, each house was noted separately because there was such a variety of



Fig. 3.13 Company house, corner Chestnut and Jefferson streets, Robinson. Photo by Kim Wallace.



Fig. 3.14 Garfield Fire Clay Company store, Front Street, Robinson. Photo by Kim Wallace.

⁹Garfield Fire Clay Company and Plan of Garfield formerly E. Robinson Estate, West Wheatfield Township, Indiana County, Pa.. Recorded October 3, 1903. D. L. Moorhead, Map of Robinson Brothers Addition to Garfield, Indiana Co., Pa.. November 1896, recorded October 3, 1903.



Fig. 3.15 *Albert Ayres house, Robinson, built by Garfield Refractories, ca.1917. Photo by Kim Wallace.*



Fig. 3.16 *Side view of Albert Ayres house, Robinson, built of hollow tile and refractory bricks. Photo by Kim Wallace.*

valuations and lot sizes that none could be grouped together. The lack of consistency suggests that there was never a strict company housing policy nor a concerted effort to build houses to attract and keep employees. The fact that the company did own houses nevertheless shows how much it was taken for granted as a standard practice. Local residents identified one surviving company house, a double dwelling at the corner of Chestnut and Jefferson streets.¹⁰ (Fig. 3.11)

Virtually all the houses in the community are frame, vernacular buildings dating from the late nineteenth century through the 1920s. (Figs. 3.8-3.9) One striking exception is located east of the Robinson Brothers Addition. It is a square-plan, pyramid-roofed structure built of hollow tile and refractory bricks, the only example found in the survey. (Figs. 3.15-16) According to the current

resident, the Garfield Fire Clay Company built it in 1917 for Albert Ayres, one of their managers. Flawed bricks that could not be sold were carted from the yard to the site, and carefully selected and laid to organize sizes and hide flaws. The house is built into the side of a hill and has two full stories. A privy was also built of the buff- and gold-colored bricks. Reportedly, the company also built other, frame houses as a benefit for upper level employees.¹¹

¹⁰Tax assessment records, West Wheatfield Township, Indiana County. Mabel Liebold, interview by author, Robinson, Pa., September 25, 1991. Harry I. Miller, interview by author, Robinson, Pa., September 25, 1991.

¹¹Miller interview.

A Garfield Fire Clay Company store was opened shortly before 1900. The original wood-frame store was replaced by a buff-brick building that stands facing the state road near the former plant entrance just opposite the bridge to Bolivar. (Fig. 3.14) The store was closed in the late 1930s when the Garfield Company went into bankruptcy and control shifted from Francis Robinson to John Rugh; both were grandsons of Elliott Robinson.¹²

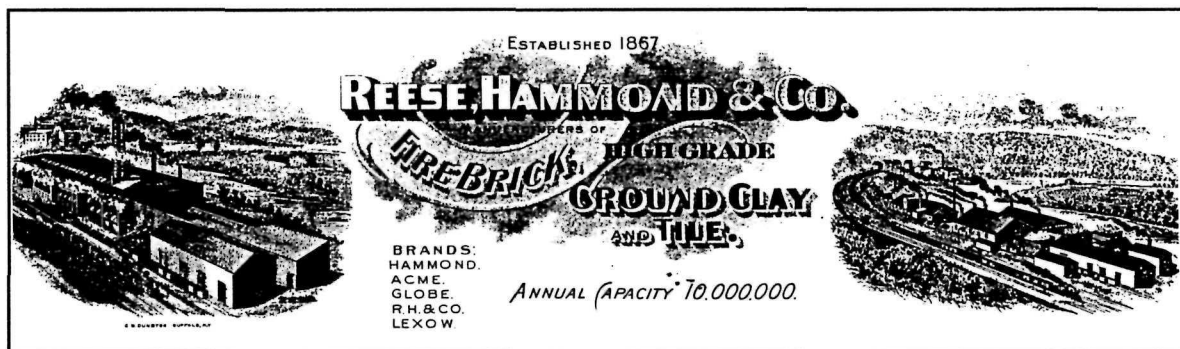


Fig. 3.17 Letterhead of Reese, Hammond and Co., 1898. Special collections, Hillman Library, Univ. of Pittsburgh.

Bolivar

Elliott Robinson sold his first brickyard to Libengood and Boyd in 1862. A few years later it was purchased by James Hammond, then employed as its superintendent, and his brother Thomas, who were Irish immigrants. In the 1870s they were joined by partners John McMath and Isaac and B. F. Reese. McMath and the Reeses pioneered brickmaking in Clearfield County when they built a brickyard at Woodland in the late 1860s. Their Bolivar investment was incorporated as the Reese-Hammond Fire Brick Company in 1898. (Fig. 3.17) By 1900 it operated four brickyards in Bolivar and Robinson and had interests in the Curwensville Fire Brick Company in Clearfield County and in the Hammond Fire Brick Company in Fairmont, W. Va. In addition to refractories, it manufactured paving brick, face brick, and enameled brick.¹³

James Hammond's son, James Brett "J. B." Hammond, took over the Reese-Hammond Company in the 1890s. He graduated from Indiana State Normal School in 1887, and began work as a teacher. He moved on to keep accounts for Reese-Hammond, managed the company store for two years, then became salesman for the firebrick department. Thus groomed for a position of leadership, he was assigned the office of treasurer and general manager when the

¹²Liebold and Godfrey interviews. Erma Gibson, interview by author, Bolivar, Pa., September 25, 1991. Tax assessment records, West Wheatfield Township, Indiana County. Robinson in Bolivar (Sanborn Map Company, 1909, 1915, 1927).

¹³The Manufactories and Manufacturers of Pennsylvania of the Nineteenth Century (Philadelphia: Galaxy Publishers, 1875), 271. Stephenson, III:298. Cunningham, "Brick Yards" in "History of Bolivar." Clearfield Sesqui-Centennial 1954, souvenir program, 44-45.



Fig. 3.18 Overview of Bolivar looking southeast. Lincoln, McKinley, and Walnut sts. are at the top of the photo. Collection of Anthony Bernabo.

company was incorporated in 1898. He expanded the family's involvement in Pennsylvania brickworks, building the Curwensville Fire Brick works in Clearfield County in 1899-1900 and founded the Kentucky Fire Brick Company in 1906. He invested in other companies with plants in Ohio, Alabama, and Georgia, and served as an officer in several national brick trade organizations. In 1913, he consolidated two of his local plants, the Bolivar Face Brick and the Phoenix Fire Brick companies, with the Joseph Soisson Fire Brick Company based in Connellsville, Fayette County. In 1914 Hammond attempted to launch a national political career from this strong business base. He was a Progressive, Prohibitionist candidate for Congress but lost by 400 votes. He did serve two terms as a state representative and as representative to the state and national conventions of the Republican and Progressive parties. On the local level Hammond seems to have been involved in virtually all the important municipal, business, and fraternal organizations.¹⁴

The Hammond family played a literally and figuratively formative role in Bolivar's development. In 1882 a local historian wrote that "the chief business interest in the place is the production and manufacture of firebrick from deposits of fire clay which lie next the Conemaugh River." By the late 1890s J. B. Hammond oversaw five of the local brickyards. As the principle property owners and overseers of Bolivar's prosperity, in early 1902 the Hammonds had two plans drafted for the town's expansion along Walnut, Lincoln, and McKinley streets--one plan

¹⁴"James Brett Hammond" and "Brickyards" in Cunningham, "History of Bolivar." The Hammond family's Curwensville Fire Brick Company was purchased at receiver's sale by Bickford Fire Brick Company which became the Crescent Refractories Company in 1917 and merged with North American Refractories Company in 1929. Curwensville 150th Anniversary, 1799-1949 (Curwensville, Pa., 1949), 129.

was named for and apparently sponsored by the Reese-Hammond Fire Brick Company, the other by William McClure Hammond. (Fig. 3.2)¹⁵

The company built a variety of houses along the new streets. In 1905 the Reese-Hammond Fire Brick Company was assessed for ten houses and three vacant lots on Lincoln Street, twenty-one houses and twelve vacant lots on McKinley Street, and ten houses on Walnut Street.¹⁶ (Fig. 3.18) It is not clear whether this property was treated strictly as company housing and rented only to company employees. Although many of the houses are still standing, they do not help clarify the question. While houses on some portions of the streets look like company housing--alternating rows of two utilitarian, wood-frame house forms (Figs. 3.19-20)--other sections have more substantial high-style house forms with brick and shingle siding. (Figs. 3.21-22) Yet, like company houses, these were also built from only a few basic plans placed alternately along the street.

Several of these houses were known as homes of members of the Hammond family. (Fig. 3.23)

At the turn of the century Bolivar's economic future seemed assured and other new construction--a bank (Fig. 3.24), an opera house, a large hotel and department store and a



Fig. 3.19 Reese-Hammond Fire Brick Company houses, Lincoln Street, Bolivar. Photo by Nancy Spiegel.

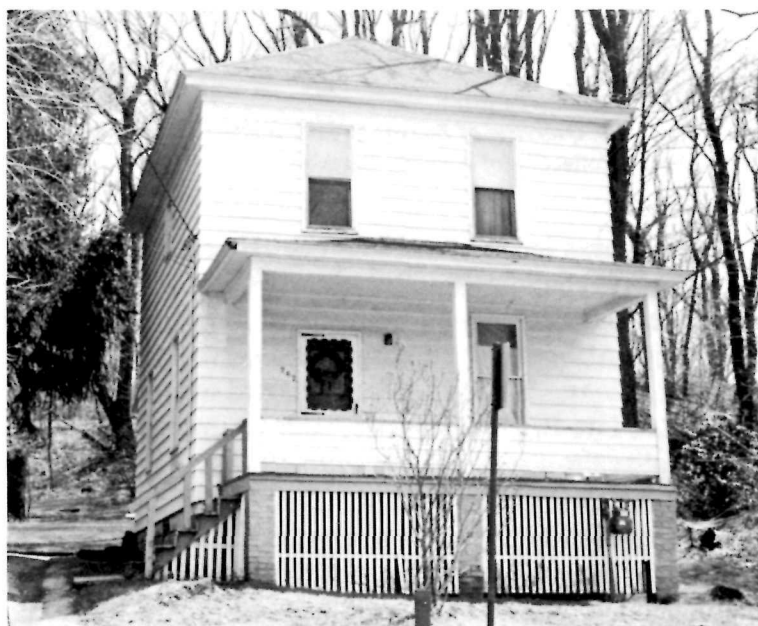


Fig. 3.20 Reese-Hammond Fire Brick Company house, 767 Lincoln St., Bolivar. Photo by Nancy Spiegel.

¹⁵S. A. Taylor, Plan of Lots for Reese Hammond Fire Brick Company Bolivar Westmoreland County, March 1900, recorded Feb. 24, 1902. S. A. Taylor, Plan of Lots for W. Mc. Hammond Bolivar Westmoreland County Pa., recorded Feb. 14, 1902.

¹⁶Tax assessment records, Bolivar, Westmoreland County.



Fig. 3.21 Reese-Hammond Fire Brick Company house, 851 McKinley St., Bolivar. Photo by Nancy Spiegel.



Fig. 3.22 Reese-Hammond Fire Brick Company house, 754 Lincoln St., Bolivar. Photo by Nancy Spiegel.

municipal central heating system--was initiated. A panic in 1902 curbed expansion, caused a bank failure, and pushed several brickyards towards bankruptcy. Reese-Hammond's No. 1 Works burned in the same year, and apparently the company did not recover intact. It was sold at sheriff's sale in 1909, and some of the manufacturing properties were taken over by Garfield Fire Clay Company. Others continued to operate, coming under the Joseph Soisson Company name after 1913.¹⁷

After 1910, part of the company's residential properties were assessed to J. B. Hammond, "trustee," and the remainder to the William M. Hammond estate. From 1920 to 1950 the latter properties were assessed to W. B. Hammond, "merchant." After 1955 they came under the holdings of Garfield Refractories.¹⁸ The houses and lots entrusted to J. B. Hammond were transferred to the Bolivar Realty Company--J. B. Hammond, President; C. W. Hammond, Secretary. In 1913 the local newspaper noted that the Realty Company was making excavations for four six-room houses on the south side of McKinley Street. In 1918 Bolivar

Realty's holdings were sold to the Fairfield Coal and Coke Company (later renamed Bolivar Coal and Coke), a transfer reflecting the growing importance of coal mining in the local economy. The houses and lots were owned by the coal company until 1950 and so figure in local residents'

¹⁷"The Golden Era of Bolivar," "Bolivar National Bank," "Bolivar Opera House," and Mrs. F. B. Gibson, "History of Bolivar" in Cunningham, "History of Bolivar." Tax assessment records, Bolivar, Westmoreland County.

¹⁸Tax assessment records, Bolivar, Westmoreland County.



Fig. 3.23 Hammond family house, corner McKinley and 6th sts., Bolivar. Photo by Nancy Spiegel.



Fig. 3.24 Bolivar National Bank, Washington and 1st sts., Bolivar. Photo by David Ames.

memories as coal company rather than brick company houses.¹⁹

Garfield Refractories was still the largest area employer in 1940 and drew employees from Robinson, Bolivar, and West Bolivar. (Fig. 3.25) Glenn Garland, a resident of West Bolivar, started work in the brickyard's sandstone quarry in that year and stayed with the company until it closed in 1979. He was familiar with the spectrum of work in the plant and witnessed the effects of mechanization and the decline of the industry. While working in shipping and loading, he ran one of the plant's first tow motors and estimated that it reduced the amount of time to load a boxcar by a third. But the plant's long, rectangular kilns, each with an 80,000-brick capacity, still took six men with a tow motor three to four days to unload.²⁰

About 165 men worked at the brickyard in 1940. Using a stiff-mud machine, two dry presses, and some hand molders, they made refractories for a variety of customers, including Johnstown's Bethlehem Steel and coke oven installations in Connellsville, Johnstown, and Watertown, N.Y. After World War II orders for coke oven brick fell off, followed before long by those for furnace brick. In the

¹⁹Gibson, "History of Bolivar," in Cunningham, "History of Bolivar." Tax assessment records, Bolivar, Westmoreland County.

²⁰Glenn Garland, interview by author, West Bolivar, Pa., September 25, 1991.



Fig. 3.25 View of Garfield Refractories plant west of Robinson from Bolivar. Collection of Johnstown Area Heritage Ass'n Archives.



Fig. 3.26 Garfield Refractories delivery truck. Collection of Johnstown Area Heritage Ass'n Archives.

plant's later years automation reduced the workforce to about sixty. Its owners sought to keep the facilities and products up-to-date. They sponsored research in the new refractory forms of castables and specialties, and as the importance of railroad shipping declined in the 1960s, they invested in a truck fleet (Fig. 3.26) to make faster deliveries.²¹

As part of its diversification efforts, Garfield Refractories purchased the Patton Clay Manufacturing Company in northern Cambria County in 1967. The Patton community was famous for brick making, especially for its

²¹Garland interview. Johnstown *Tribune-Democrat*: Harry M. Emerick, "Bolivar Firm 121 Years Old," (January 22, 1965); Harry Emerick, "Garfield Refractories' Backlog Grows," (January 20, 1967); Harry Emerick, "Garfield Refractories Plans Diversification," (January 26, 1968).

"Patton Pavers," used to pave streets and plazas across the U.S. and in Europe. Although some refractories were made there, the works specialized in clay pipe and building and paving bricks. The Patton works closed in 1960, and Garfield planned to reestablish clay pipe production, introduce clay pigeons for skeet shooting and, more improbably, to inaugurate a line of pizza, spaghetti, potato chips, and pretzels. The reopening was unsuccessful, as was the Garfield company's diversification. The Robinson works closed in 1979 and was demolished in the late 1980s. A sewage treatment plant now occupies the site. The Patton plant was razed in 1981 to make way for senior citizen housing and a mini-mall.²²

Salina: The Modern Brickyard

Like those at Bolivar and Robinson, the Salina brickworks had its origins in the nineteenth-century investment practices of western Pennsylvania businessmen. Its founder held interests in a number of industrial and manufacturing concerns scattered across the region, but his sons concentrated on the firebrick works and made it into a family business. In the early twentieth century they devoted much attention to building the adjacent town, providing residences and services for their employees, then converted the plant into the most modern twentieth-century refractories facility in the country, and sold it to General Refractories, a national company, in 1930. (Fig. 3.27)

Samuel M. Kier was a Pittsburgh-based entrepreneur whose business profits were derived largely from investments in Fayette and Westmoreland counties. He was an early investor in one of the Bolivar brickyards, but his name became most closely associated with the town of Salina and its refractory brick works. He inherited his business wherewithal from his father who was a pioneer in drilling salt deposits along the rivers northeast of Pittsburgh near what became the towns of Saltsburg and Salina. Kier began his own career transporting such materials to markets with a controlling partnership in the Merchant's Line of Pennsylvania canal boats. Other Pennsylvania businessmen who were among his partners in this enterprise were Benjamin F. Jones who later founded Jones and Laughlin Steel, in Pittsburgh, and James Buchanan who was elected president in 1856. Just a few years before the canal boats were made obsolete by the railroad, Kier turned his attention to the properties he inherited along the Allegheny and Kiskiminetas rivers.²³

About 1845 petroleum began contaminating the area's salt wells, and rather than discard it into the canal as other merchants did, Kier bottled the liquid, outfitted a fleet of medicine show wagons, and began selling it as a miracle cure-all. Although this venture proved successful --

²²Johnstown Tribune-Democrat: "Patton Clay Plant Is Sold," (July 21, 1967); "Patton Refractories Workmen Operating a Steam Press," (January 26, 1968); "Patton Project on Tap," (December 31, 1981); John J. Como, "Clay Plant Fading," (June 21, 1981); "Ground Broken For Patton Projects," (January 8, 1983). Richard Quinn, Indiana County, Pennsylvania: Inventory of Historic Engineering and Industrial Sites (Washington, D.C.: Historic American Buildings Survey/Historic American Engineering Record, National Park Service, 1992), 130-31.

²³Tax assessment records, Fairfield Township, Westmoreland County. Danny Mitchell, "Samuel Martin Kier: Pioneer Industrialist," unpublished term paper, June 9, 1966, 3-5.

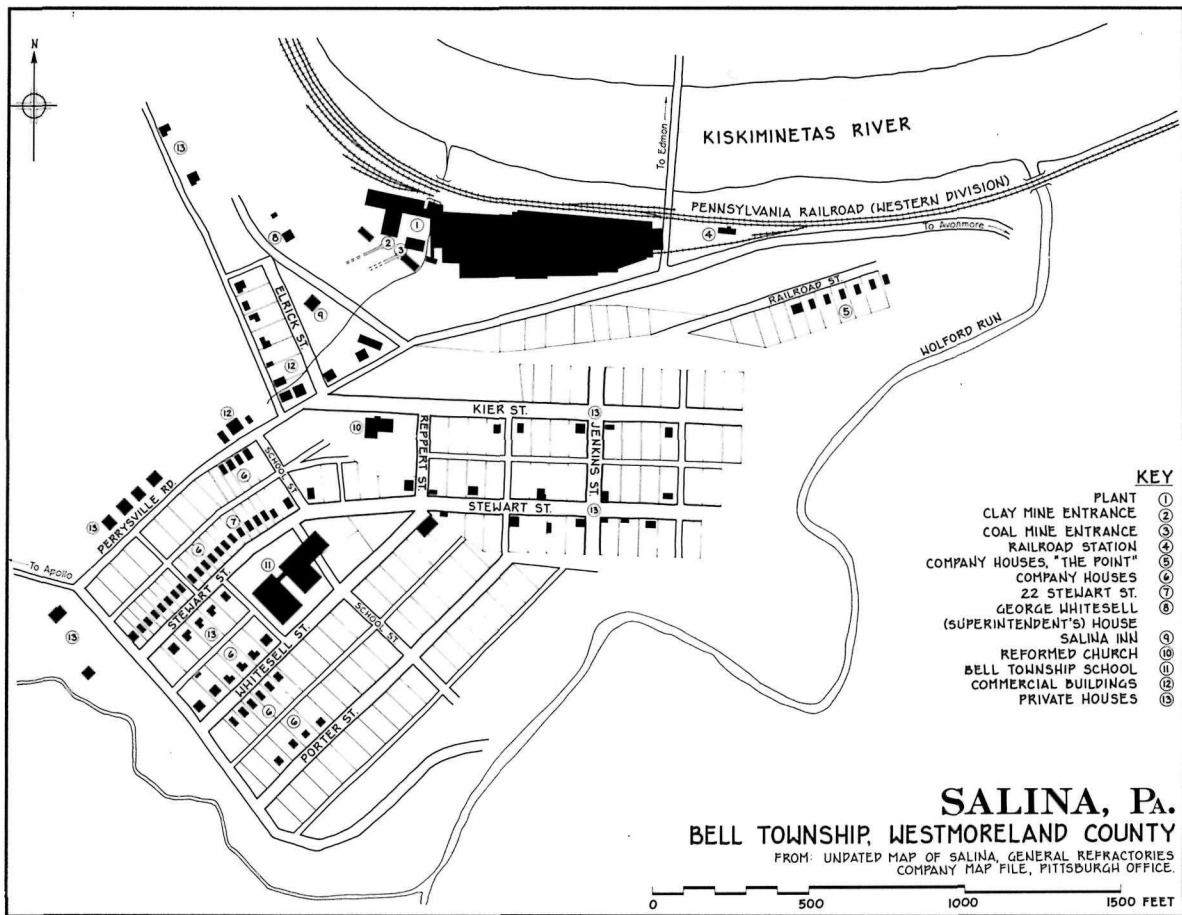


Fig. 3.27 Map of Salina showing town and brick plant along the Kiski River. Drawn by Isabel Yang.



Fig. 3.28 View northeast from the Salina Inn over the brick plant and river. Photo by David Ames.

"Kier's Rock Oil" was sold into the 1870s and Kier descendants were still receiving requests for it in the 1950s--Kier also pursued other ways to dispose of the oil. He manufactured coal-oil salve and soap, then experimented with distilling processes and refined oil for use in oil lamps. He made other investments in an iron furnace, coal mines, lumbering and pottery making. When he died in 1874 he had just started construction of the



Fig. 3.29 Miners at the Kier Fire Brick plant, Salina. Collection of C. C. Muffley.

firebrick works at Salina and his sons oversaw its completion.²⁴

In June 1876 the Saltsburg Press published a description of the new Kier Fire Brick Works and its adjacent town. In the typical fashion of local boosterism, the paper declared that "in point of enterprise, Salina . . . is not excelled by any other place on the line of the West Penn Railroad."²⁵ A fifty-nine-lot town had been plotted on the hill above the plant. It was described as "beautifully situated on the table land west of the railroad track and presents an inviting appearance to those who desire a healthy and convenient location for a rural home." In February 1876 fifteen to twenty of the lots had been sold "upon some of which improvements have been made." The houses were individually owned, but the Kier company sponsored a general store. The manager of the brickworks, R. A. Paul, also managed the store and kept "a large and varied stock [of] goods, suitable to the wants of the people of Salina and the surrounding county."²⁶

²⁴Mitchell, 6-15. A number of sources date the Kier brick works at Salina to 1845, but 1875, when tax assessors first recorded the works, seems more likely. Tax assessment records, Bell Township, Westmoreland County.

²⁵"Salina Station," Saltsburg Press (June 28, 1876), 3.

²⁶Elizabeth J. Kier's Plan of Lots, Salina, Bell Township, Westmoreland County, Penna., "Lots 1 to 58 inclusive are shown in the original plan of Salina recorded Oct. 24, 1876 in Corporation Docket No. 1, page 229." Recorded February 1, 1908, Westmoreland County Courthouse. "Salina Fire-Brick Works," Saltsburg Press (February 23, 1876), 3.



Fig. 3.30 Brickyard crew at Kier Fire Brick plant, Salina. Collection of C. C. Muffley.

The Saltsburg Press pointed out that the railroad was essential to Salina's "enterprise"; the "successful existence of these works may, in a great measure, be attributed to the location and construction of the West Penn Road, which affords a rapid and easy transit to the marts of trade." Although railroad access was a prerequisite for all brickyards and often determined their shape and organization, this was especially so at Salina and would influence not only the plant layout but also its technology. The hillsides rise steeply on both sides of the river, but there was room for the works on a narrow triangle of flat land on a river bend at the entrances to clay and coal mines. (Fig. 3.27-28) The original railroad grade hugged the brow of the hill 420 feet above the works near the town site and an inclined plane was built to haul bricks up to a track-side storage shed.²⁷

In 1876 the Salina firebrick plant was supplied with clay by eight men who mined about twenty-two tons in a nine-hour day. Mules pulled loaded tram-cars from the mine to an open pile where about 1,000 tons of clay were weathered to make it more workable. Molders and repressers turned out bricks onto a hot floor with an 8,000-brick capacity. There was one 16' x 20' kiln and plans for building two more.²⁸ Hand molders made 450-500 bricks per hour, and with two molders working each day, 8,000-9,000 bricks were readied for the kilns. In 1896 a soft-mud molding machine rated at 12,000 bricks in nine hours was installed. Four years later the phase-out of the hot floor began with the installation of sets of tunnel dryers, and shortly after

²⁷"Salina Fire-Brick Works" Saltsburg Press (February 23, 1876), 3.

²⁸Ibid.



Fig. 3.31 Six original Kier Fire Brick Company houses along Main St., Salina. Photo by Kim Wallace.



Fig. 3.32 Kier Fire Brick Company houses on "the point" above Salina station. Collection of Donna Strong.

were built on Stewart Street. Locally known as "twenty row," they form the residential heart of the community. (Figs. 3.33-34) Six houses of this plan were also built on a bluff overlooking the

1900 a higher speed, 24,000-per-day brick machine went into production.²⁹ (Figs. 3.29-30)

For its first twenty-four years the Kier Fire Brick Company depended on the available local labor supply, but just after the turn of the century, it began a house building program in a more concerted effort to increase and stabilize its workforce. Between 1900 and 1905 the company built twelve houses. Half were probably one-story buildings located along the river next to the plant. The other six were two-story, four-room, gable-front structures facing Salina's main street, the Perrysville Road. (Fig. 3.31) By 1910, thirty-eight more houses, a hotel, and a town hall had been built on lots set out in the Elizabeth J. Kier plan of Salina, recorded in the Westmoreland County courthouse in February 1908. By 1915 there were five more houses along Porter Street for a total of fifty-five. Twenty of the houses, identical to those along Perrysville Road,

²⁹"Short History of the Use of Machinery in Making Fire Brick at Salina Plant," typescript, no date.



Fig. 3.33 Kier Fire Brick Company houses, Stewart St. ("Twenty Row"), Salina. Photo by David Ames.



Fig. 3.34 Rear view of company houses in "Twenty Row," Salina. Photo by David Ames.

river. Their geographical isolation meant that their residents were also somewhat socially isolated in a mini-neighborhood called "the Point." (Fig. 3.32) These were very basic houses with two rooms on each floor, front porch, back stoop, and partial cellar. The later houses built on Whitesell and Porter streets were larger in plan with five and six rooms.³⁰ (Fig. 3.35)

None of the houses was built with plumbing. There was an outhouse and coal shed in each back yard. Residents carried water from hand pumps located between every two houses.³¹ Upkeep and repair of the houses was an assignment of the company general maintenance crew, indicating that they were viewed as another branch of plant operations. The crew responded to requests to deal with specific problems such as leaky roofs or broken windows and regularly renewed the uniform exterior paint scheme of white with black trim.³²

³⁰Tax assessment records, Bell Township, Westmoreland County. Author's interviews with Leonard Stover, June 29, 1991; C. C. Muffley, June 29, 1991; Robert and Lula Ripple, May 16, 1991.

³¹Dr. Cochran, who built a large brick house on the west edge of town (Fig. 3.36), became proprietor of the Salina water company in the 1930s when neighbors asked him to extend pipes from his well. Stover interview.

³²Stover, Muffley, and Ripple interviews.

There are fairly clear divisions between Salina's private and company-built housing and between the original 1876 plan and the 1908 expansion. A variety of late-nineteenth-century vernacular house forms were built on the original lots along Kier and Elrick streets and the eastern half of Stewart Street roughly parallel to the curving edge of the hill overlooking the Kiskiminetas River. The Perrysville Road, Salina's main street, was developed at the same time the company houses were built. Its private houses and commercial buildings, including the Salina State Bank (Fig. 3.37), date from about 1900 to the 1940s. The company housing, along Railroad, Porter, and Whitesell streets and the northwestern side of Stewart Street, can be identified by its uniformity and lack of ornament. A few more private houses are interspersed on the southeast side of Stewart Street. One of Salina's

largest houses, a two-and-a-half-story, colonial revival building occupies a prime site in the 1876 plan overlooking the plant and the river. (Fig. 3.38) It was called "the superintendent's house" not because it was a company house, but because it was built by George Whitesell, a longtime superintendent whose family was involved with the Kiers in company management.³³

Three company-owned public buildings were also located directly above the plant. The



Fig. 3.35 Kier Fire Brick Company houses on Porter St., Salina. Photo by David Ames.



Fig. 3.36 Dr. Cochran house at the end of Salina's main street. Photo by David Ames.

³³Carl C. Muffley, interview by author, Salina, Pa., June 29, 1991.



Fig. 3.37 *Salina State Bank, now the U.S. Post Office on Salina's main street. Photo by David Ames.*

company store was transferred to private ownership by the early twentieth century and replaced with another building so that current residents have no memory of it. The community building, listed in tax records as the town hall, is remembered as a favorite social center. It had a basketball court, pool tables, and bowling alley, and was often the site of dances. It burned down in the late 1930s. The three-story, mansard-roofed hotel, built to accommodate visiting clients and sometimes to board unmarried employees, is the only one of the three still extant and in use.³⁴ (Fig. 3.39)

The Kier company's residential construction was completed about 1915. In its next modernization effort it returned to the plant proper and planned a full-scale make-over designed, at least theoretically, to reduce the need for labor rather than guarantee it. The reorganization centered around the replacement of the plant's two rows of rectangular, periodic kilns

with tunnel kilns. No other refractories plant had tried the tunnel kiln method so this move involved more than the usual risk in experimenting with new machinery. It was further complicated by the fact that the plant site was already crowded and awkward. (Fig. 3.40) The railroad track had been moved in the 1880s from the hillside to the edge of the river so it was closer to the plant, but it was still elevated about fifteen feet above the plant floor. The old kilns could not be demolished to make room for tunnels



Fig. 3.38 *Superintendent George Whitesell's house, Salina. Photo by David Ames.*

³⁴Tax assessment records, Bell Township, Westmoreland County. Robert and Lula Ripple, interview by author, Salina, Pa., May 16, 1991.



Fig. 3.39 Kier Fire Brick Company hotel, Salina Inn. Photo by David Ames.

because the company wanted to continue burning brick during the remodeling and wanted a fall-back in case the tunnel kiln failed. As a solution to the lack of space, a second floor was built even with the level of the railroad. An elevator lifted bricks from the tunnel driers up to the new tunnel kiln, and after the firemen successfully mastered the peculiarities of its operation, one row of periodic kilns was demolished. Their tops

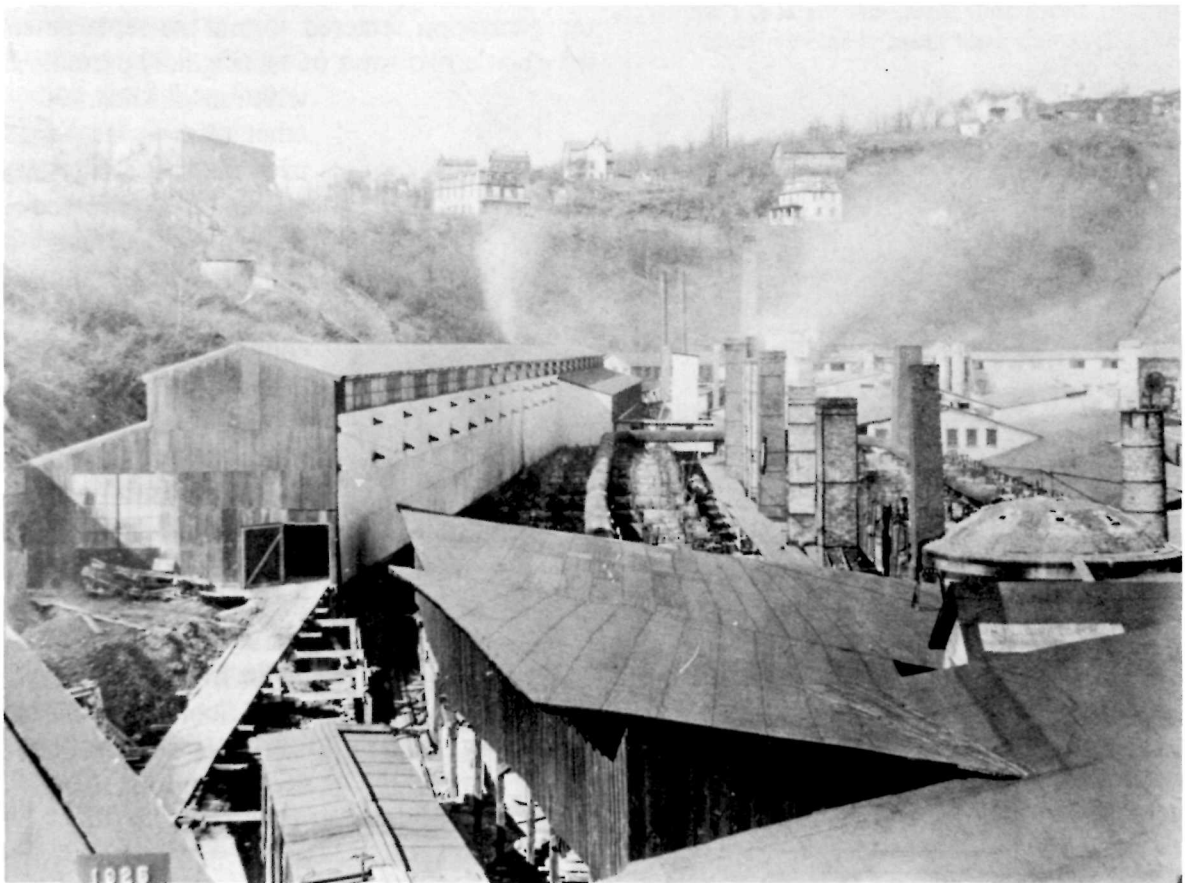


Fig. 3.40 View west over Kier Fire Brick Company plant, 1925. Salina Inn at center. Collection of Leonard Stover.

were knocked in and blast furnace slag provided by the railroad was tamped in and around them until another section of the plant was raised to the new level. A second tunnel kiln was then built alongside the first, and the remaining periodic kilns were filled in to put all the main plant operations on one level. (Figs. 3.41-43) In the new layout a team of two men stood at each of three presses and set green brick on kiln cars which were then pulled through

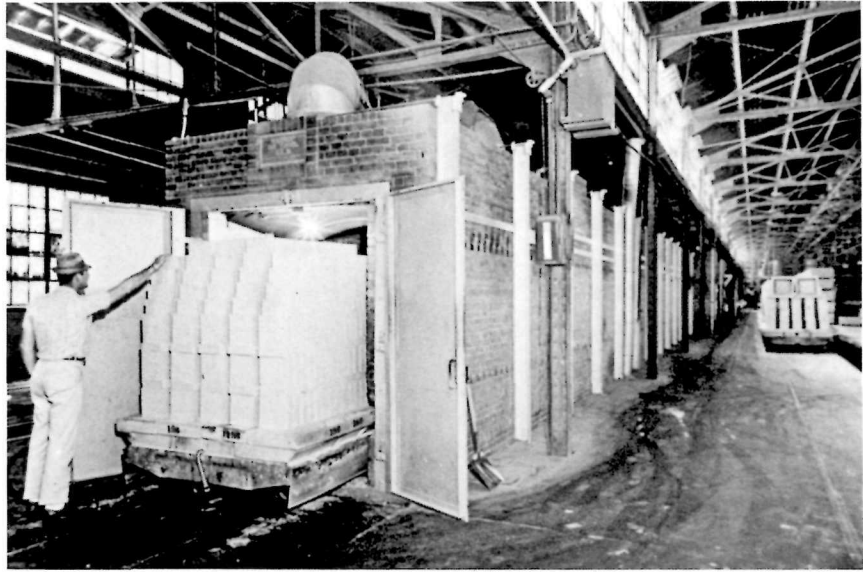


Fig. 3.41 Burnt bricks exit the tunnel kiln in the Salina brick plant, ca. 1964. Natural gas company publicity photo, collection of Leonard Stover.



Fig. 3.42 View east over the Salina brick plant, about 1940. Houses on "the point" at top right. Collection of Leonard Stover.

the drier-kiln cycle. For standard shapes, handling was reduced to a minimum, and with a railroad siding on each side of the plant (Fig. 3.44), wheeling distances were significantly shortened.³⁵

Although plant manager B. E. Whitesell described the remodeling for his peers at a meeting of the American Ceramic Society in 1929, he did not include details on cost and labor savings. Industrial directories show a decline in the labor force at Salina—from 150 in 1919 to 116 in 1925 to 110 in 1931—but this is comparable to figures at other plants that were not so completely mechanized.³⁶ Whitesell did mention a few improvements for workers that are suggestive of brickyard working conditions. Instead of dumping each hand-molded shape onto the drying floor, he said, workers filled steel pallets on the molding table then set them on the floor. This kept the shapes more stable and uniform and also allowed "the men to work in more comfortable positions" because it reduced the number of times they had to stoop and bend to the floor. A new



Fig. 3.43 Salina plant manager Lefty Stover watching gauges on tunnel kiln. Publicity photo for natural gas company. Collection of Leonard Stover.



Fig. 3.44 Railroad siding at Salina brick plant, looking west. Photo by David Ames.

³⁵B. E. Whitesell, "A Tunnel Kiln Refractories Plant," preprinted for use at annual meeting of the American Ceramic Society, Chicago, Ill., Feb. 1929.

³⁶Ibid.

ventilation system that circulated waste heat from the kilns for use in the driers also brought cool air from the clay mine to relieve the firemen working next to the kilns. A cleanliness and maintenance policy was also introduced. "All departments are cleaned daily, the machines being stopped fifteen minutes before quitting time and cleaned. It has proved well worth the effort, because good labor can and will do still better and will enjoy work more with clean, well-lighted surroundings."³⁷



Fig. 3.45 Kier Fire Brick Company baseball team. Collection of C. C. Muffley.

General

Refractories bought the Kier Fire Brick Company in 1930, adding the fully modernized plant to its roster. It apparently made little change in plant operations and maintained the local involvement initiated under the Kiers. It continued to oversee the company houses, social hall, and hotel. Salina's company-sponsored baseball team was an important focus and expression of community life through the 1930s and 40s. (Fig. 3.45) Good players were sought as employees and given

preferential treatment at work so they were in good form for important games.³⁸

Before and after the transfer in ownership, company publications praised employees at Salina. One Kier descendant wrote that "the rapport between men and officials was one of admiration and friendship." An article in the Grefco Press recounting the plant's history concluded: "one of the things that has always made this plant outstanding and successful is the efficiency of the employees, who are mostly local people interested in the welfare of the community and plant."³⁹

Many Salina residents had lived in the immediate area for generations. A few families

³⁷Whitesell, 7, 10-11.

³⁸"The General Refractories Company," Grefco Press (September 1946), 2. Robert and Lula Ripple, interview by author, Salina, Pa., May 16, 1991.

³⁹Mary Wright McKee, "The Kier Fire Brick Company, 1845-1932," leaflet. "History . . . Salina Plant," Grefco Press 1 (July 1947), 1-3.



Fig. 3.46 Salina school and students, view east on Kier Street, early twentieth century. Collection of C. C. Muffley.

moved from the brickyards in Bolivar and Robinson to work at Salina. Others became part of the local community about the turn of the century when they immigrated from eastern Europe. One of the shorter rows of company houses was called "Guinea Row" in colloquial reference to its concentration of Ukranian and Polish immigrants. Despite such name calling, the "foreigners" seem to have been accepted into the community. One resident compared Salina to coal towns like nearby Edmon and Tintown because they shared the close, "clannish" feel of a self-contained community where everyone knew everyone else, went to school, to church, gossiped, and worked together.⁴⁰ (Figs. 3.46-47)

In the late 1930s when unionization gained some support from the federal government and was made a more immediate issue in the surrounding coal mines, District 50 of the United Mine Workers organized a local at Salina. According to a former president, it did not have much strength in its first years and "was never a radical union." Yet General Refractories was concerned enough about its institution to try to stave it off by giving bonuses to employees just before they were to vote on the union. Although there were a few brief shutdowns and occasions when the company lawyer came from Philadelphia to meet with union representatives, none of the disputes progressed to formal arbitration, and there was never a strike against the plant.

⁴⁰William Cunningham, Bolivar, to author, April 6, 1992. Ripple interview.

Older workers who remembered the union's early days valued it because they could express opinions about day-to-day operations without fear of repercussion, but felt it necessary to emphasize that supporting it did not diminish their pride and willingness to work nor did it mean that the Salina plant was not a good place to work.⁴¹

Ambivalence about the union as an institution was not simply the expression of people in a conservative time and area, it was a more complicated reaction to the general decline of unionism and to the sense

of powerlessness in the face of economic change. The Salina brickyard was closed despite union concessions. General Refractories ceased operations there in 1979, citing industry pressures. A few men found work at Sproul and Claysburg, just as some transferred to Salina a few years earlier after plant closings at Orviston and Beech Creek. Remaining raw materials and equipment were sent to the Sproul and Claysburg plants. The buildings at Salina are now used to store brick cars, molds, and machinery salvaged from the Claysburg closing and awaiting shipment to a General Refractories plant still operating in Lehigh, Utah.⁴²



Fig. 3.47 Bell Township Elementary School opposite "Twenty Row" on Stewart Street, Salina. Photo by David Ames.

Blandburg: Brickyard Strike, Company Social Work

At Blandburg, site of the Harbison-Walker Refractories Company's Cambria Works, evidence survives from the town's and plant's early years to suggest the complications of creating an industrial manufacturing community. The little mountain town near the Allegheny summit was settled in the 1870s, formally plotted in 1891, and was alternately known as Figart Station for the name of its railroad station and as Blandburg after local



Fig. 3.48 Blandburg depot and tower, 1908, near present Rte. 865 railroad overpass. Collection of Thomas McGowan.

⁴¹Stover and Ripple interviews. George Sucke, interview by author, Salina, Pa., June 26, 1991.

⁴²Sucke, Stover, and Ripple interviews.

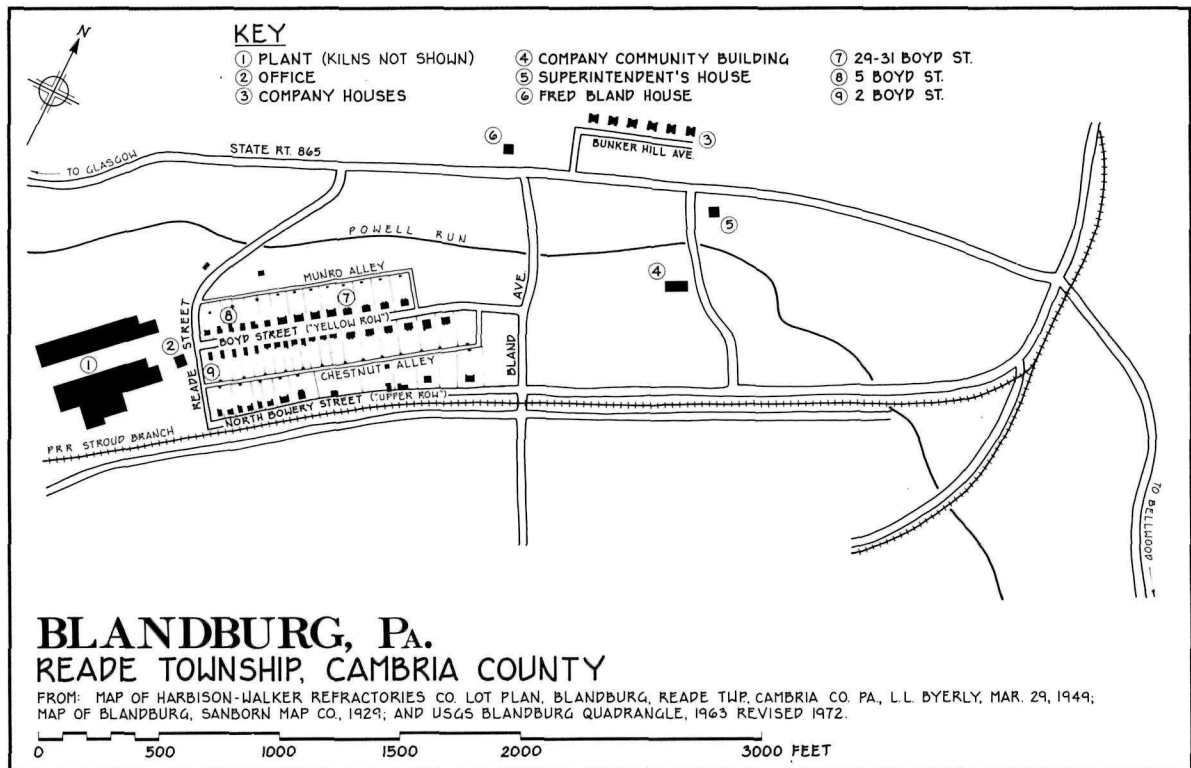


Fig. 3.49 Map of Blandburg showing location of plant and company houses. Drawn by Isabel Yang.



Fig. 3.50 U.S. Post Office, Bland Avenue between Boyd and N. Bowery streets, Blandburg. Photo by David Ames.

businessman Fred Bland. (Figs. 3.48-52) It was situated in an area of small coal mines in the northeast corner of Cambria County. A seam of fire clay was discovered under the E seam coal (Fig. 3.53), and in 1891 a group of investors obtained a lease on mining rights and formed the Cambria Fire Brick Company. By early 1892 their plant and kilns were completed and produced 13,000 bricks each day.⁴⁴

About this same time Harbison and Walker Refractories of Pittsburgh was looking for ways to expand production and supplement its clay supplies. In 1884 the company had

⁴⁴"Fred Bland" in *Biographical and Portrait Cyclopedia of Cambria County* (Philadelphia: Union Publishing Company, 1896), 264-65. "Names on Bi-Centennial Quilt and Brief History of Blandburg," (Reade Township Volunteer Fire Company Ladies Auxiliary, 1976). James E. MacCloskey, Jr., *History of Harbison-Walker Refractories Company: From Star to Vega and Beyond* (Pittsburgh, 1952), 36-37.

purchased the Woodland Fire Brick plant in Clearfield County, and in 1893 purchased mining rights on fourteen acres near Blandburg. The next year negotiations were completed to transfer Cambria Fire Brick stock and the firebrick works to Harbison and Walker for \$80,000.⁴⁵ During the months after the sale company officers in Pittsburgh wrote the Blandburg superintendent advising him on how to deal with local business people and with the company's own employees, guiding him through the integration of the newly acquired "Cambria [County] Works" with the larger company, and introducing him to its more modern organizational practices. They inquired when brick with the Harbison and Walker brand would be available and forwarded orders for him to fill from iron and glass manufacturers in New England, mid-Atlantic and midwestern states and even for customers in Cuba and China. He was

admonished to adhere to stricter company record-keeping methods--to file monthly reports and divide costs of labor, time, and materials between appropriate accounts. He was sent specifications on plant improvements and maintenance--the Blandburg office was papered, a new floor and additional windows were installed in the main plant building, and the overall layout of



Fig. 3.51 Historic view of Fred Bland house and store at the north end of Bland Avenue, Blandburg. Collection of Thomas McGowan.



Fig. 3.52 Fred Bland house at the north end of Bland Avenue, Blandburg, 1991. Photo by David Ames.

⁴⁵MacCloskey, 36-37.

storage sheds and railroad sidings was rearranged for greater efficiency.⁴⁶

The surviving correspondence from the Pittsburgh office to the Blandburg superintendent is one-sided and spotty, but is most complete for the years just after the acquisition of the Cambria works until about 1904. These early letters are especially valuable for the view they provide of a strike by brickyard workers against Harbison-Walker Refractories. The correspondence gives an account of the strike that is, of course, company-biased, and for that reason also provides fascinating insights into the mindset and strategizing of the company leadership.⁴⁷ Reports in the Johnstown Tribune allow just a glimpse at how the strike appeared to local residents and participants.

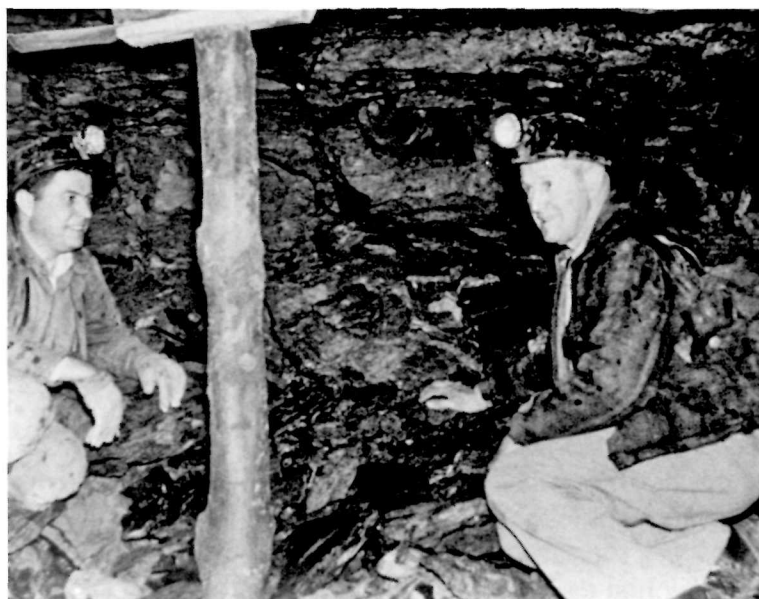


Fig. 3.53 Robert Johnson, miner, and Foster Troxell, superintendent, in the clay mine at Blandburg. Collection of Thomas McGowan.



Fig. 3.54 Dinkey track at the Blandburg brickyard. Collection of Thomas McGowan.

In 1899 a letter from the Harbison-Walker assistant treasurer notified each works of the company policy towards employee unionization. There had been some undisclosed "trouble" at the Cambria works and the instigators "made some threat of sending a committee over to the other works to stir up trouble." Managers were to be on the watch for these men and to identify them by name so that they could be discharged from the company's employ and from company

⁴⁶H-W to John E. Evans, correspondence, May-December 1894. MacCloskey, 66-67.

⁴⁷For example, for almost three weeks after the strike was officially declared, the word "strike" does not appear in the letters. Company officers preferred to use "shutdown," a word that implied that the company chose to close a plant perhaps as a way of preempting a strike.

property.⁴⁸ In 1902 Harbison-Walker general manager Otto M. Reif responded to the Blandburg superintendent J. A. Boyd's report about impending unionization efforts. He firmly instructed Boyd to "make it known that we will never recognize any union and that any men joining such an organization are liable to discharge at once."⁴⁹ In 1903 there was more "trouble." This time it escalated into a strike described in the trade journal Clay Record as "one of the most bitterly contested in the history of labor disputes in Western Pennsylvania."⁵⁰

On May 9, 1903, the National Association of Brick, Tile, and Terra Cotta Workmen of the American Federation of Labor declared a strike against Harbison-Walker Refractories.

According to Clay Record their only demand was the reinstatement of twenty-five men whom the company reportedly fired not because of their union membership but because they tried "to induce others to join" the union.⁵¹ At Blandburg organizing attempts appear to have started among the



Fig. 3.55 Early photo of brickyard workers and horses at kilns in Blandburg brickyard. Collection of Thomas McGowan.



Fig. 3.56 Looking southeast across Rte. 865 to Harbison-Walker Company houses, Blandburg. Collection of Thomas McGowan.

⁴⁸H. W. Croft to Cambria, Dec. 19, 1899.

⁴⁹O. M. Reif to J. A. Boyd, Sept. 18, 1902.

⁵⁰"New Move Made By the Harbison-Walker Refractories Co. to Operate Their Plants," Clay Record 23 (August 29, 1903), 21.

⁵¹Ibid. "Brick Makers On Strike," Johnstown Tribune (May 9, 1903). "Brick Plants Are Tied Up," Johnstown Tribune (May 11, 1903).

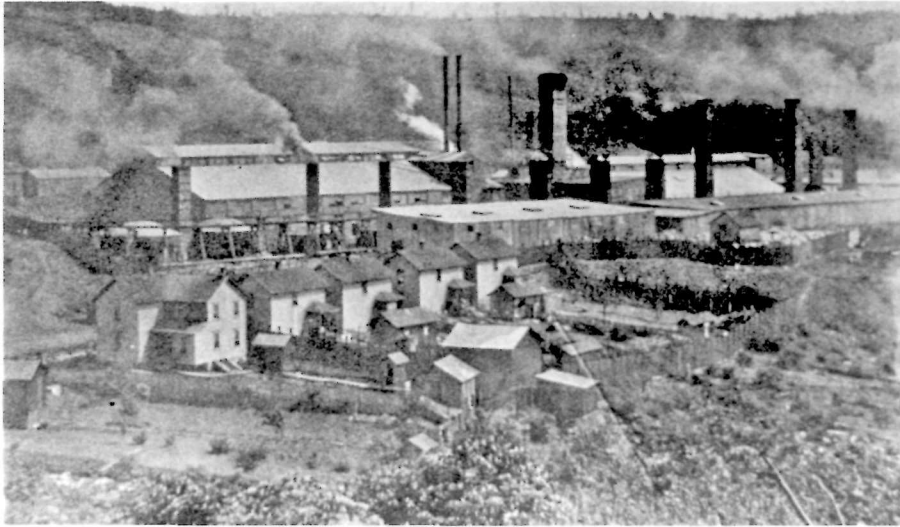


Fig. 3.57 View south showing fence around the H-W plant and houses at the end of Boyd St., Blandburg. Collection of Thomas McGowan.

company coal miners. On March 11, 1903, Superintendent Boyd was instructed to inquire quietly among local independent coal mine operators for estimates to supply the works. A suggestion that the company could shut down its mines to demonstrate its independence was deemed a good strategy to deter a strike by coal miners as well as "help us considerably with clay miners."⁵² On



Fig. 3.58 View east from brickyard. H-W office, foreground; Yellow Row; six double houses extreme top. Collection of Thomas McGowan.

⁵²H. W. Croft to H. B. Errett, cc. J. A. Boyd, March 2, 1903. O. M. Reif to J. A. Boyd, March 11, 1903, March 12, 1903.

April 1, however, the Pittsburgh office responded to a notice that the Blandburg clay miners had requested a wage increase. Boyd was to schedule a meeting and advised not "to mention anything about a Union. If the men come to meet us and say that they represent a Union, it will be a good opportunity for us to tell them that we cannot recognize them as such."⁵³ Three weeks later Reif asked Boyd to rush the construction of a fence around the works (Fig. 3.57) and "to write me a letter daily, keeping me fully posted on everything that occurs at your Works while this trouble lasts. We must all co-operate and try to block any move they make."⁵⁴

Reif believed that he sensed "a weakness on the men's part" and hoped that they were "not yet ready to go out." He instructed Boyd to stand firm on company policy and "keep discharging all men who become prominent in this union." Miners who had been fired and were still living in company houses were to be sent eviction notices.⁵⁵ There is some hint that the strike and threatened evictions exposed some illegal or at least damaging aspects of Harbison-Walker's housing policies; in September a company lawyer sent Boyd copies of the company's revised tenement house leases with a terse note to "destroy all the old ones you have in your possession for they are dangerous."⁵⁶ He was to take pains to be accommodating to the

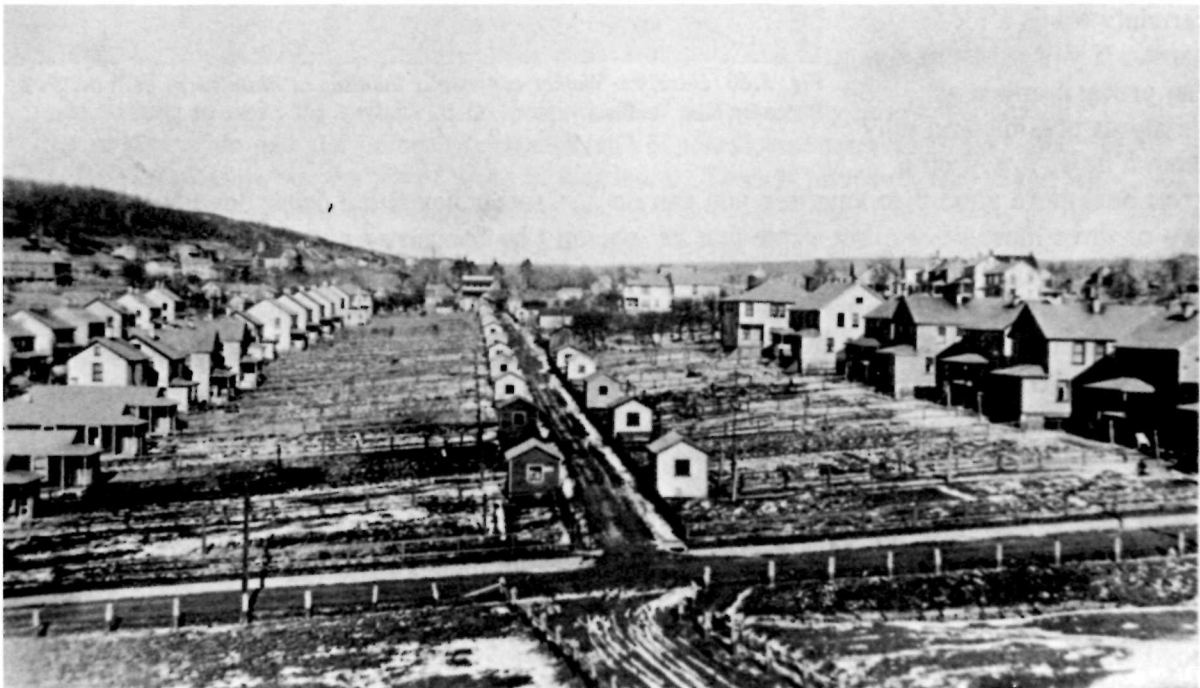


Fig. 3.59 View northeast from plant between company houses in "Yellow" and "Upper" rows, Blandburg. Collection of Thomas McGowan.

⁵³H. W. Croft to J. A. Boyd, April 1, 1903.

⁵⁴O. M. Reif to J. A. Boyd, April 22, 1903.

⁵⁵O. M. Reif to J. A. Boyd, April 22, 1903.

⁵⁶J. E. MacCloskey to J. A. Boyd, September 30, 1903.

replacement workers, immigrants recruited for the company by an agent in New York City.

We might be compelled to send in more men to you right along and we must take care of them when they come. The proper way to do this is to have the beds set up in the house and enough to eat on the day that they arrive. This is one of the most important things about keeping the foreign laborers.⁵⁷

By May 15 the Blandburg brickyard was closed and workers were throwing rocks at the company watchmen. Harbison-Walker general manager H. W. Croft counseled Boyd to be "extremely careful" and avoid "any outbreaks of temper . . . as it will certainly do us a lot of harm. If you treat this tin-can procession just as lightly as possible and jolly them a little, it will do a



Fig. 3.60 Harbison-Walker community building at Blandburg, built in 1916.
Photo by Kim Wallace.

great deal more good than anything you can do." Croft believed the "shut-down" would continue two or three more weeks, but wrote that he wouldn't be concerned even if it lasted longer. "If there is any Works that deserves a good loaf, this is it."⁵⁸ Blandburg was judged to be the most intransigent of all the Harbison-Walker plants. "Do you feel any disposition on the part of any of your men to want to go to work again?" Croft asked on May 19. "I expect your Works to be the last one to start up, as it has always been such a hot bed for strikers."⁵⁹

Croft wrote to Boyd again the next week predicting that he would

have trouble all summer at your Works from the nature of the people in Blandburg. Next to your own Works I think Retort and Phillipsburg are about the worst, particularly Retort, as they have pretty much the same kind of element you have.

Boyd was kept posted on the situation at other plants--that there was a small contingent of men still working at the Widemire, Clearfield, and Woodland works; that a union meeting at Hayes Station drew only ten members; that organizing efforts at Johnstown and Mt. Union had been abandoned as futile. As a preliminary to starting up the Blandburg works, Croft suggested that

⁵⁷O. M. Reif to J. A. Boyd, April 22, 1903.

⁵⁸H. W. Croft to J. A. Boyd, May 15, 1903.

⁵⁹H. W. Croft to J. A. Boyd, May 19, 1903.



Fig. 3.61 Children's activities at the community building, Blandburg. Collection of Thomas McGowan.

Boyd quietly go about encouraging his men to reconsider their actions. "I would begin doing as much missionary work among your men as possible and have your foremen and clerks talk in this way. Also talk to any of the merchants and people in town who seem to have influence." At the same time he was cautioned to avoid personally alienating his neighbors:

do nothing to make the strikers or the people dislike you personally as this will have a great deal to do with the Company's success, and of course, has everything to do with whatever pleasure you get out of living in Blandburg. There is no reason why any of the inhabitants should have any feeling against you, as it is the Company that is doing all of this, and I shall so try to impress the men in talking to you when at Blandburg.⁶⁰

The company sent official letters of appreciation to employees who remained faithful, and sought the arrest and prosecution of those who could be identified as somehow breaking the law.⁶¹ In Clinton and Clearfield counties the company undermined workers' confidence in their union leaders by organizing trips to Pittsburgh and Mt. Union where they could see plants that were still operating contrary to union claims of a company-wide shut-down. Croft wrote to Boyd May 29 describing the apparent success of this measure and suggested the time might be right to try it at Blandburg by selecting a delegation of "union men whom you are satisfied will report as things actually are." He almost bragged about the calculation behind the move; "this might have been done sometime ago but there was no use until the thing was about ripe."⁶²

There was an equal note of self-satisfaction in Croft's intimation of the intended demoralizing effect of brazenly transporting immigrant replacements past the strikers. Even though "they are certainly holding out and seem very determined," he wrote, "our shipping in

⁶⁰H. W. Croft to J. A. Boyd, May 21, 1903.

⁶¹H. W. Croft to Boyd, Davis, Errett, and M'Quillen, May 16, 1903. President and General Manager to Dear Sir, n. d. H. W. Croft to J. A. Boyd, May 29, 1903, June 3, 1903. J. E. MacCloskey to J. A. Boyd, November 6, 1903.

⁶²H. W. Croft to J. A. Boyd, May 29, 1903.

three or four car-loads of foreigners and having special engine to run them right through and push them into our yard has had a very good effect all along the line."⁶³ According to the *Johnstown Tribune*, however, this strategy sometimes backfired. In July, sixty-eight men deserted the works when they learned they had been employed as strike breakers. In one version of this event, the men became suspicious when they were confined within the barricaded works and delegated one of the group to escape after dark to question the local citizens. In another version, some women who lived in a house next to the works were threatened by a company engineer when they told the new men why they were recruited.⁶⁴



Fig. 3.62 Boys poised for the penny pitch, community building, Blandburg. Collection of Thomas McGowan.

Solidarity--between immigrants and natives, strikers and other area residents, brick workers' and other unions--was an important factor during the strike and was alternately challenged and defended. The brick workers' union called for a general boycott of Harbison-Walker products and claimed to have the support of railroaders who refused to move 500 cars loaded with Harbison-Walker bricks and of the

United Mine Workers and other branches of the Federation of Labor which pledged not to work anywhere Harbison-Walker bricks would be used.⁶⁵ In May 1903, a striker from the company's local clay mine wrote a letter to the editor in response to the reports portraying the strikers as "criminals, plotting death and destruction." On the contrary, he wrote, the strikers' "reputation and character will not suffer in comparison with the individuals who misrepresented them." It was these "amateur detectives and ambitious sub-officials" who circulated reports that the strikers were "cutthroats and rioters" and who envisioned themselves as the dime novel hero "who, single-handed and alone, beats off the 'horde' of infuriated strikers and wins fame and a

⁶³H. W. Croft to J. A. Boyd, June 11, 1903.

⁶⁴"Still Trying To Break It," *Johnstown Tribune* (July 1, 1903). "Every Man Marched Out," *Johnstown Tribune* (July 3, 1903).

⁶⁵"Every Man Marched Out," *Johnstown Tribune* (July 3, 1903).

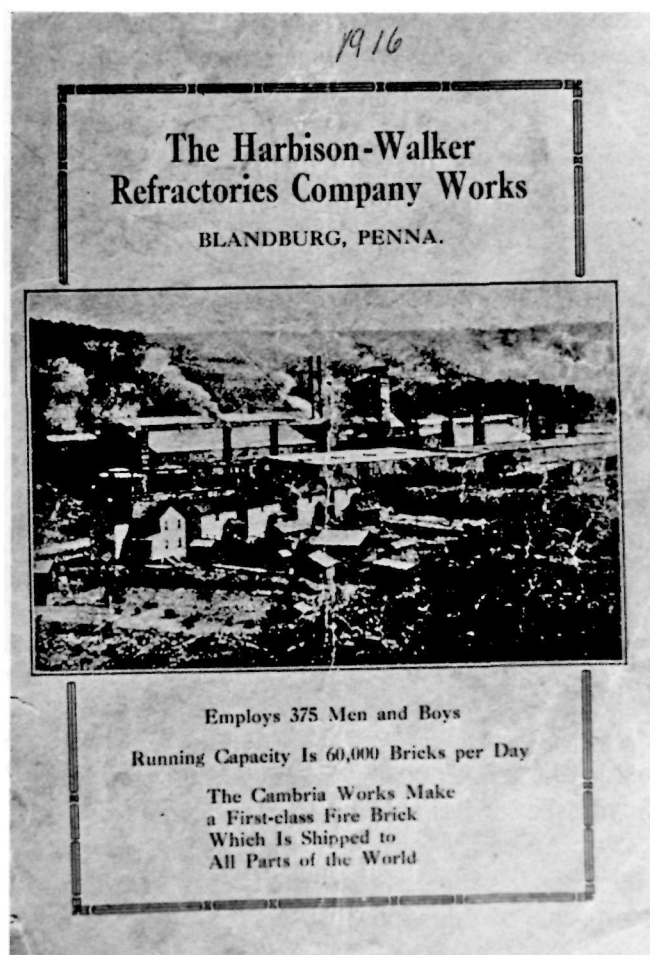


Fig. 3.63 Cover of Harbison-Walker company publication, 1916. Collection of Denver and Laudelle Beers.

superintendency, as well as an increase in salary." The writer glossed over any divisions between strikers and local residents, emphasizing instead that the strikers were also local residents and that they were being slanderously accused by "those who are practically strangers in our little community." He also suggested that these outsiders were responsible for the antagonism between immigrants and residents:

Ignorant foreigners have been led to believe that lifelong residents and taxpayers are seeking to do them bodily harm, and as a consequence they appear on our highways armed and equipped in true brigand style, displaying knives and pistols, to the admiration of the Small Boy and fear of the peaceful denizens of Dean Township.

Two months after this letter was published, the Tribune described a violent confrontation between the Blandburg strikers and Slavic immigrants hired to replace them. The strikers stationed a group of boys at the works entrance to

taunt the "foreigners" into threatening them. Several people were injured and a nearby house was damaged in the ensuing "riot." The company guards, purportedly hired to protect the works and the immigrants, were drawn into the fight. One was arrested for beating the foreigners trying to get them back into the brickyard. Any potential alliance between townspeople, strikers, and sympathetic replacement workers had disintegrated.⁶⁶

Immigrants, primarily from Eastern Europe, were sent to the plants to supplement the workforce throughout the year, even before the strike. In September 1903, an agent in New York wrote to Boyd to arrange for someone to meet the "fifteen Hungarians and Poles for the coal and clay mines" he was putting on a train to Bellwood.⁶⁷ The superintendent at Farrandsville in Clinton County wrote Boyd complaining about having to train new crews:

⁶⁶"Strikers Not Lawbreakers," Johnstown Tribune (May 22, 1903). "Another Harbison-Walker Riot," Johnstown Tribune (July 29, 1903).

⁶⁷C. J. Henderson to J. A. Boyd, September 6, 1903.

We are having our trouble here just now. Forty-six men arrived this morning. They are laborers whom we secured from agents in New York and shipped here ourselves. They are worse than sheep and a tough set at that.⁶⁸

Superintendent Boyd was reminded at several points to reserve vacant company houses for new arrivals. In November O. M. Reif sent a representative to contact employment agents in New York and Philadelphia, specifically requesting that a priority be given to finding families with at least two boys willing to go to work as "offbearers"



Fig. 3.64 Company houses at southwest end of N. Bowery Street ("Upper Row"), Blandburg, looking north. Photo by David Ames.

carrying bricks from the molding tables and presses to the hot floor.⁶⁹ Boys aged thirteen to fifteen would need their parents' permission. Boyd asked if it would be legal for them to work rather than go to school. Reif replied that the district "Factory inspector" had assured him that "it is alright if they can read and write in their own language and if they attended the schools in their own Country, so I guess we cannot get into trouble of this kind."⁷⁰ Reif told agents that

the smallest boys can make 75 [cents] per day and so on up, according to their strength, to \$1.20 per day. They can easily do their days' work in about 7 hours and always get a chance to work extra if they wish, whereby they can increase their earnings. We will agree to give the head of the family work providing he is a willing worker and does his work satisfactorily. A man can make from \$1.45, for labor work, to \$2.15 per day for the better class of work, according to his ability.

We will agree to pay back the fares of the family when the boys have worked for the Company for three full pays, or 1 - 1-1/2 months.⁷¹

Although Reif hoped to find fifty boys for the Cambria works, he told Boyd there was

⁶⁸Davis to J. A. Boyd, March 20, 1903.

⁶⁹O. M. Reif to Nin McQuillen, R. P. M. Davis, J. A. Boyd, November 3, 1903.

⁷⁰O. M. Reif to J. A. Boyd, November 10, 1903.

⁷¹O. M. Reif to C. J. Henderson, cc. Nin McQuillen, J. A. Boyd, and R. P. M. Davis, November 3, 1903.

no danger of you getting a rush of these families as our reports from the East are very discouraging on these lines. Boys of this age [are] not coming to this Country and their parents when they come at all come without them. However, if we get one a week for all our Works, it will help us some.⁷²

The Pennsylvania Industrial Directory for 1919 listed the number of "men under sixteen" reported at each plant. Two-thirds of the plants in twelve Pennsylvania counties show no under-age employees. Among the remainder it is unusual for the number to exceed four or five. The Osceola Silica and Fire Brick Company and the Bickford Fire Brick Company in Clearfield

County were exceptions, reporting forty-five and thirty under-sixteen employees, respectively.⁷³



Fig. 3.65 The Blandburg Grade School once stood on the north side of Rte. 865 near Bland Avenue. Collection of Thomas McGowan.



Fig. 3.66 Reade Township High School just west of Blandburg, remodeled as a medical center. Photo by David Ames.

Despite all the company strategizing and recruitment, in August 1903 the strike was still on and the plants were producing at only 60 percent capacity. The industry journal, *Clay Record*, reported that the company was resorting to the courts to obtain injunctions against strikers at each plant. The first was granted by Judge O'Connor in Cambria County "against sixty persons, twelve of whom were women." Two hundred new men were working at the Blandburg brickyard, and the company testified that because of "the interference of the strikers" it was "forced for their protection to keep them quartered in buildings erected on the property."⁷⁴ Company officers conferred with their lawyers attempting to preserve the injunction as long as possible. They were apprehensive that the

⁷²O. M. Reif to J. A. Boyd, November 10, 1903.

⁷³Pennsylvania Industrial Directories. Perhaps these two companies were more honest in reporting the number of young employees.

⁷⁴"New Move Made By the Harbison-Walker Refractories Co. to Operate Their Plants," *Clay Record* 23 (August 29, 1903), 21.

judge would rescind the injunction "for political effect" before the November election.⁷⁵ Although the Blandburg operations continued to be plagued by strikers, Boyd was advised that since there was "no violence or gatherings as formerly [sic], no action should be taken . . . this seems to be the proper thing to do in view of the coming election and the situation in this county."⁷⁶ Minor confrontations continued through September and October. Boyd reported to Pittsburgh that his immigrants were being harassed,⁷⁷ and Pittsburgh warned him to arrange to escort some men coming from the Retort works to repair kilns at Blandburg.

We do not want the strikers to get a hold of them again and scare them away. The men who went up formerly were met by strikers and now it is impossible for me to get any of their friends to go to your Works as they are afraid of being killed.⁷⁸

A few days before the election the company sent Boyd several reinforcements for his guard contingent. They were led by Capt. Thomas E. Clark who was highly recommended as a veteran of strikes "during the Molly McGuire days" in eastern Pennsylvania's anthracite coal region.⁷⁹ Things remained quiet through the election, but Boyd nevertheless requested that the Harbison-Walker legal department apply to the governor for commissions for Clark and his men as state-sanctioned Coal and Iron

Police. His request received immediate approval because it was thought wise to keep round-the-clock guards "for sometime to come, in order to keep confidence among the foreigners." The commissions would put the guards "in a much better position to protect our men when off our own property" and if "they get into any trouble, a commission from the Governor of the State



Fig. 3.67 Harbison-Walker Company office remodeled as a residence, Blandburg. Former brickyard site on right. Photo by David Ames.

⁷⁵O. M. Reif to J. A. Boyd, October 23, 1903.

⁷⁶Roberts Murphy to J. A. Boyd, October 2, 1903. H. W. Croft to J. A. Boyd, October 3, 1903. H. W. Croft to Roberts Murphy, October 5, 1903.

⁷⁷S. C. Walker to J. A. Boyd, October 22, 1903. O. M. Reif to J. A. Boyd, October 23, 1903.

⁷⁸O. M. Reif to J. A. Boyd, September 16, 1903. According to MacCloskey, 66-67, the company finally resorted to recruiting members of the Pittsburgh office staff to replace striking workers at the Clearfield and Cambria works.

⁷⁹O. M. Reif to J. A. Boyd, November 4, 1903 and November 5, 1903.

certainly ought to be of some protection to them."⁸⁰

The company's ability to keep its works in production, import and house workers, and secure the backing of the state eventually defeated the strikers at each plant. In October 1904, eighteen months after the strike was declared, 5,000 members of the Brick, Tile, and Terra Cotta Workers Union were still officially on strike. The union was contributing \$1,000 every week to commissaries in cities in Kentucky, southern Ohio, and western

Pennsylvania to help member families weather the strike. The union president acknowledged that they had little chance of success:

While during the last few years the employer was hunting men to work for him and was willing to pay him a fair compensation for his labor, we find that today hundreds of our members are idle and can not get work under any condition. We also find that many employers have taken advantage of the stagnation in our industry to reduce wages and insist on longer hours, not because the price of material has dropped, but, as one employer expressed himself to me, because there were idle men who were willing to work for almost anything.⁸¹

In February 1904, the Tribune reported that the strike at Blandburg seemed to have died out. The works was shut down, according to the company, because of a lull in demand and many of the workers had moved away to find other jobs.⁸²

Ironically inserted among the company dispatches during the strike is a routine memo asking each works to forward a list of its "English speaking employees to whom we can send the

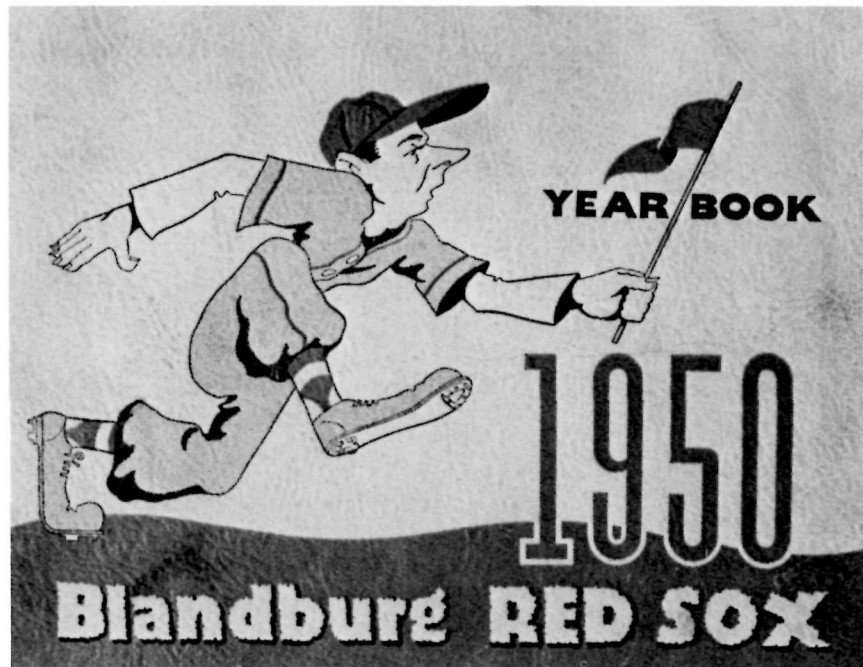


Fig. 3.68 Cover of Blandburg baseball team yearbook, 1950. Collection of Denver and Laudelle Beers.

⁸⁰S. C. Walker to J. A. Boyd, November 7, 1903. J. E. MacCloskey to J. A. Boyd, November 7, 1903.

⁸¹"Brick and Tile Workers Strike a Failure," Clay Record 25 (October 15, 1904), 34. "Brick, Tile, and Terra Cotta Workers Prepare for Trouble," Clay Record 25 (September 15, 1904), 25.

⁸²"Strike Has Died Out," [Johnstown] The Daily Tribune (February 18, 1904).



Fig. 3.69 Historic view north along Bland Avenue, Blandburg. Collection of Thomas McGowan.



Fig. 3.70 View north along Bland Avenue, Blandburg, 1991. Photo by Kim Wallace.

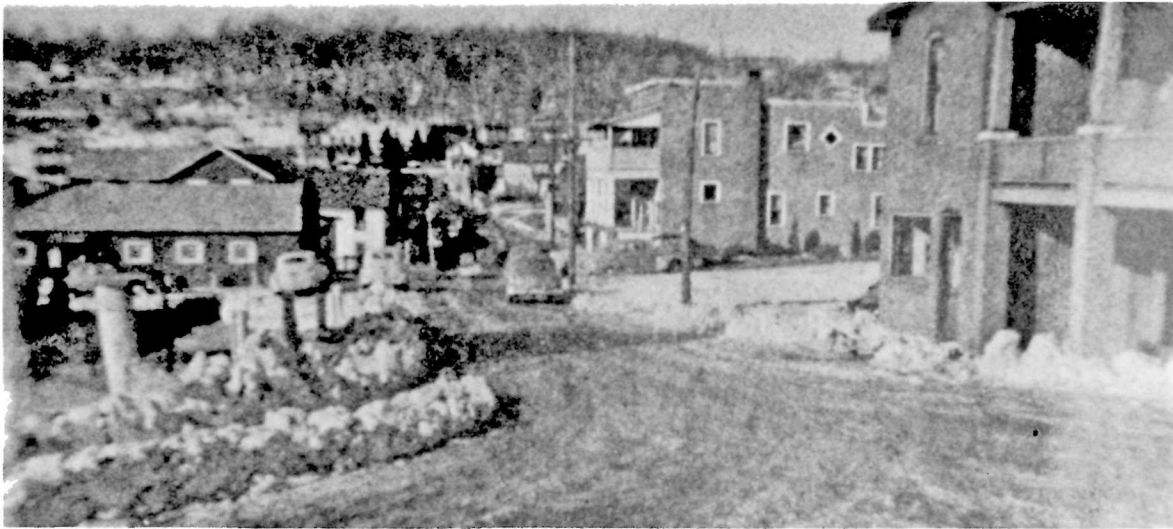


Fig. 3.71 Historic view south along Bland Avenue, Blandburg, hotel at far right. Collection of Thomas McGowan.



Fig. 3.72 View south along Bland Avenue, Blandburg, 1991. Hotel foundation at right. Photo by Kim Wallace.

Ladies Home Journal and Youths Companion."⁸³ This mundane example of company paternalism continuing as usual is suggestive of the degree of intransigence in management's conception of the worker-company relationship. On the one hand employees were just another works expense--housing and recruitment were factored into accounting categories just like plant repairs and new machinery. On the other hand, they were expected to behave as aspiring members of the middle class--cultivated, rational individuals with respect for property.

⁸³Hamilton Stewart to all works, October 27, 1903.

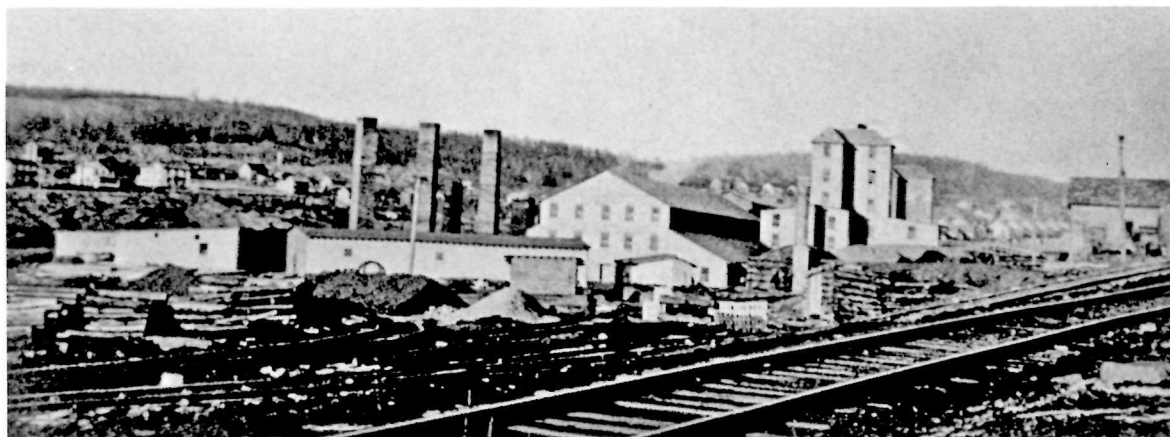


Fig. 3.73 Harbison-Walker brick plant, Blandburg, looking north, early 1930s. Collection of Thomas McGowan.

In 1916 Harbison-Walker took its efforts to achieve these contradictory ends to a new level. Perhaps motivated by lasting effects of the strike or by the number of immigrant residents who needed to be "Americanized," it built a substantial and thoroughly equipped community building in Blandburg and hired a director from New York City to organize activities. According to company publicity, superintendent Boyd turned the first shovel in ground-breaking ceremonies and "Harbison and Walker Refractories Company employees, cadets and citizens" participated by digging out the basement and foundation footers. A contractor from Clearfield built the \$17,000, two-story, buff-brick building.⁸⁴ (Fig. 3.60)

Sgt. Charles E. Graffius, the company's "Secretary and Physical Director of Welfare Work" at Blandburg, was well-credentialed with four years of military service in Alaska and the Philippines "as a government school teacher and missionary" and ten years experience in



Fig. 3.74 Reade Township Volunteer Fire Company, Blandburg, ca. 1950. Collection of Thomas McGowan.

"Y.M.C.A. Welfare work" in several cities. A report filed after he was in residence for three months listed his accomplishments and provides a summary of his responsibilities. He oversaw the preparation of the "Welfare Grove" playground equipped with "swings, see-saws, merry-go-rounds, volley ball courts, quoits and other amusements." He organized 672 people "on 63 teams of volley ball, base ball, quoits, rifle teams, Cadets and Boys' Brigade, Camp Fire Girls,

⁸⁴"The Harbison-Walker Refractories Company Works Blandburg, Penna.," booklet, 1916.

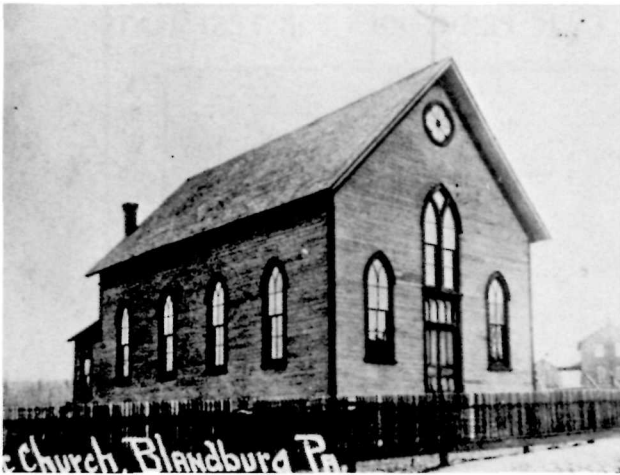


Fig. 3.75 Catholic Church along Rte. 865 on the east side of Blandburg. Collection of Thomas McGowan.

aquatic and first aid teams." (Figs. 3.61-62) In general he "visited the homes and worked early and late to entertain and find amusement for all the people of Blandburg."⁸⁵

Graffius also had a hand in attempts to improve the "sanitary conditions" of Blandburg yards and gardens. The company built fifty-two houses after it came to Blandburg, and the expansion apparently progressed without careful attention to order and appearance. During 1914-15, the company held contests for the best vegetable and flower gardens and supervised a clean-up recorded in "before and after" photographs in a company publication.⁸⁶ (Figs. 3.63, 77-78) In the early 1920s, the company

sponsored another improvement project, remodeling a number of its houses. Carpenters built partitions in second-floor rooms to provide more privacy, excavated basements and used the new space to install furnaces, showers, and toilets.⁸⁷ (Fig. 3.79)



Fig. 3.76 Row of commercial buildings east of Bland Avenue on N. Bowery Street, Blandburg, destroyed by fire. Collection of Thomas McGowan, undated.

The 1920s were Blandburg's peak years. The brickyard employed 213 people in 1925, and the town had an estimated population of 1,000.⁸⁸ In the privately owned section of town east of Bland Avenue, there were three hotels, four churches--Catholic, Lutheran, Brethren, and Methodist--and a number of general and specialty stores. (Figs. 3.75-76) A fire company was organized with company assistance and the company-supported

⁸⁵Ibid.

⁸⁶Ibid.

⁸⁷Laudelle Beers, interview by author, July 9, 1991.

⁸⁸Pennsylvania Industrial Directory (1925). Blandburg (Sanborn Map Company, 1929).

WHAT A LITTLE REPAIR WORK AND CIVIC PRIDE DOES FOR TENEMENTS



BEFORE IMPROVEMENT

The Harbison-Walker Refractories Company has built fifty-two tenement houses for their employes at the Cambria Brick Works at Blandburg. For two years the Harison-Walker Refractories Company has given \$100 in gold to the employes living in company houses for the ones having the best gardens and flowers. Under the direction of Superintendent J. A. Boyd, who has been in the employ of the company for thirty-five years, the tenements living in the company

(Continued on following page)

Fig. 3.77 "Before improvement," photo of Blandburg company houses from 1916 Harbison-Walker publication. Collection of Denver and Laudelle Beers.



AFTER IMPROVEMENT

houses have cleaned up their yards and have beautiful flower beds and good gardens, raising all kinds of vegetables. W. W. Sible and Ira D. Shaw have charge of the repair work of the tenement houses. The foremen and bosses have assisted in the repair and welfare work and each one is kept busy in his own department. The Harbison-Walker Refractories Company wishes to thank their bosses and employes for being able to ship 60,000 bricks per day to different parts of the United States, Europe and Asia. The following have been active: Superintendent of Mines Nin McQuillan, Aleck Monroe, Arthur C. Thomas, Manager Raymond Willey, Foreman George Hawn, Bosses No. 1 and No. 2, Jolly C. Anthony, John H. Alexander, Lloyd Troxell and Night Boss Howard Kuhn.

Fig. 3.78 "After improvement," photo of Blandburg company houses in 1916 Harbison-Walker publication. Collection of Denver and Laudelle Beers.

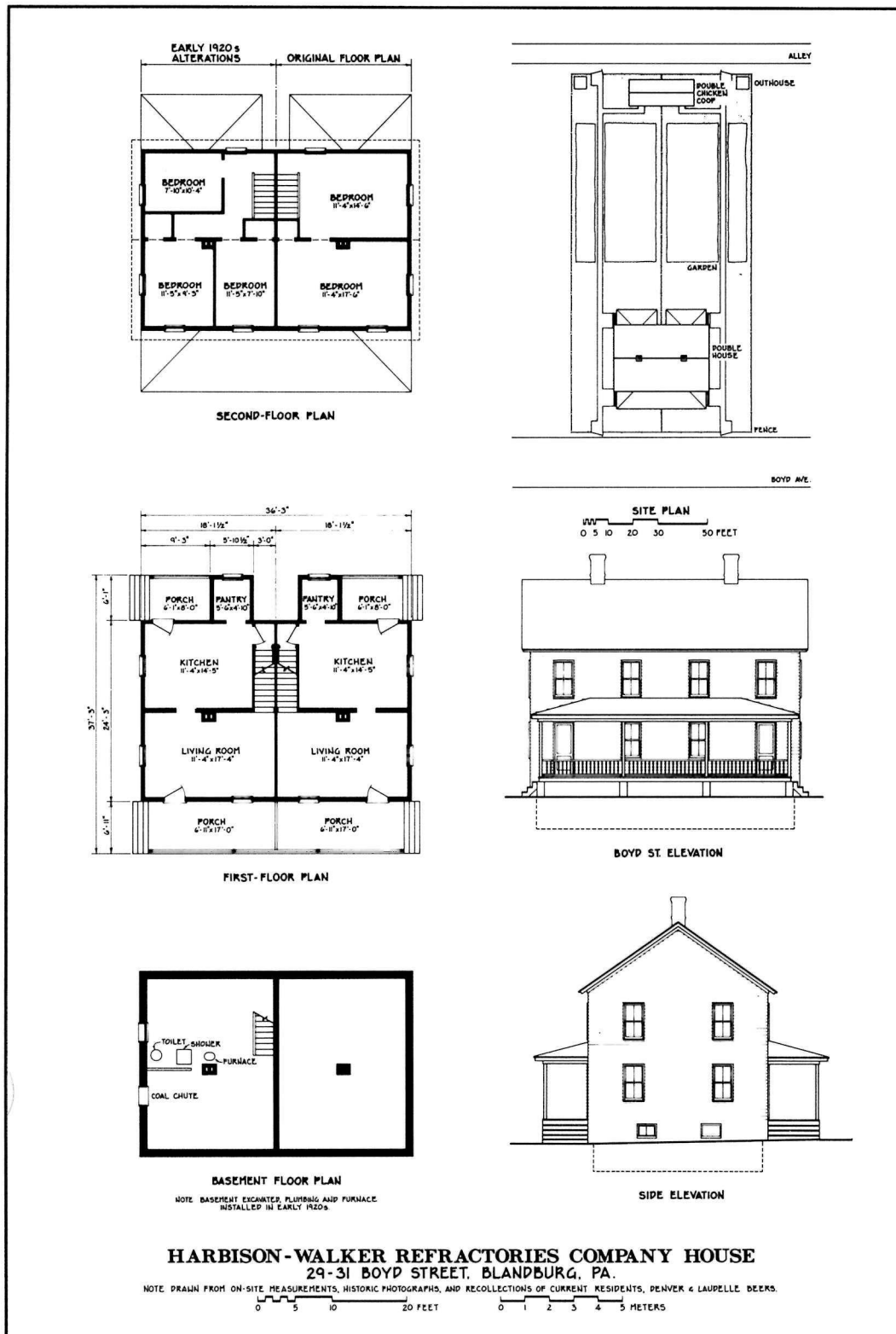


Fig. 3.79 Basement and 2nd-floor plans show 1920s improvements to this double house on "Yellow Row," Blandburg. Drawn by Isabel Yang.

baseball team, the Blandburg Cubs, was established, enjoying enthusiastic community interest through the 1950s.⁸⁹ (Figs. 3.74, 68) One resident gave some hint that Bland Avenue was something of a cultural and class dividing line in the town (Figs. 3.69-72) and that the Upper and Yellow Rows of company housing were considered a "rougher" and riskier area for outsiders to frequent. Yet more people professed no memories of tension between private and company-owned residential areas or between "immigrants" and "natives." Considering the longevity and intensity of the 1903 strike there must have been some lingering resentment between strike supporters and strike "breakers," a division that seems to have fallen

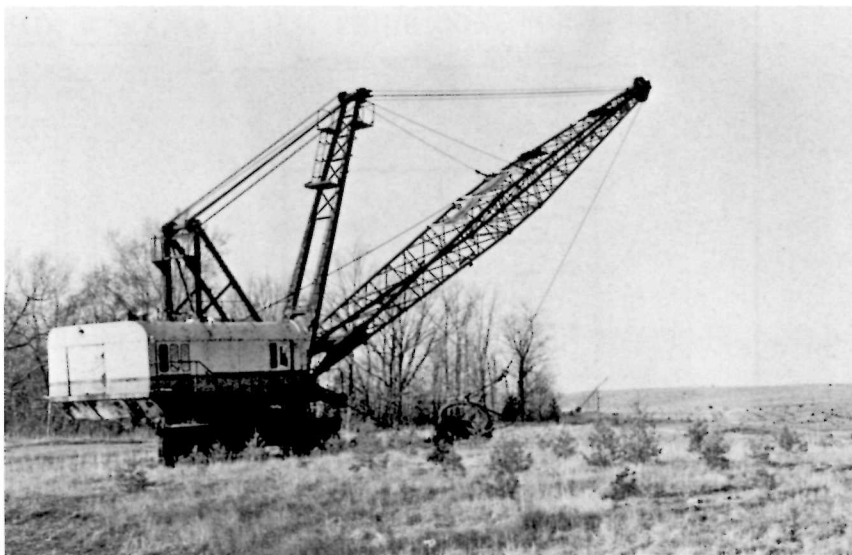


Fig. 3.80 Strip mining shovel on the outskirts of Blandburg, 1991. Photo by Kim Wallace.



Fig. 3.81 View southwest down Boyd Street ("Yellow Row"), Blandburg, 1992. Photo by Kim Wallace.

⁸⁹Pennsylvania Industrial Directories. Laudelle Beers, interview by author, July 9, 1991. Thomas McGowan, interview by author, April 27, 1991.

along a native-immigrant line, but the strike has all but faded from local oral history.⁹⁰

By 1931 the brickyard roster fell from its 1920s high of over 200 to 137, and in 1947 to 103. (Fig. 3.76) A union was finally organized and recognized just after World War II, but it was to be a short-lived victory. In 1949 Harbison-Walker began selling company houses to its tenants. Some Blandburg residents interpreted the action as a sign that the company was planning to abandon the community, and in fact, the plant was closed in 1953. A number of men moved with their families to a Harbison-Walker plant in Ohio to work until their retirement, then returned to Blandburg. A few were hired at brickyards in Altoona and Clearfield County. Others found work in "the strippins," the strip mine operations around the area. (Fig. 3.80) The kilns and plant buildings were all demolished in the 1950s, with the exception of the office which was converted into a residence. (Fig. 3.67) Forty years later Blandburg's identity as a brickyard town is still very strong even for residents born after the plant closed. Even though the kilns and the plant--the structures outsiders might consider the most obvious physical remnants of the brickyard--are gone, family and community memories and the distinct, U-shaped neighborhood of former company houses provide living, day-to-day reminders.⁹¹ (Figs. 3.81, 4.18)

Mt. Union and Kistler: "A Racketeering Borough" and a Model Industrial Village

When Harbison-Walker bought the plant at Blandburg in 1894, it owned two other brickyards--its original Star Fire Brick Works in Pittsburgh and the Woodland works in Clearfield County. By 1902 it owned thirty-three plants--twenty-seven in Pennsylvania, four in Ohio, and two in Kentucky. One of the additions to the company's holdings was the Mt. Union works of the W. H. Haws Fire Brick Company. It was built

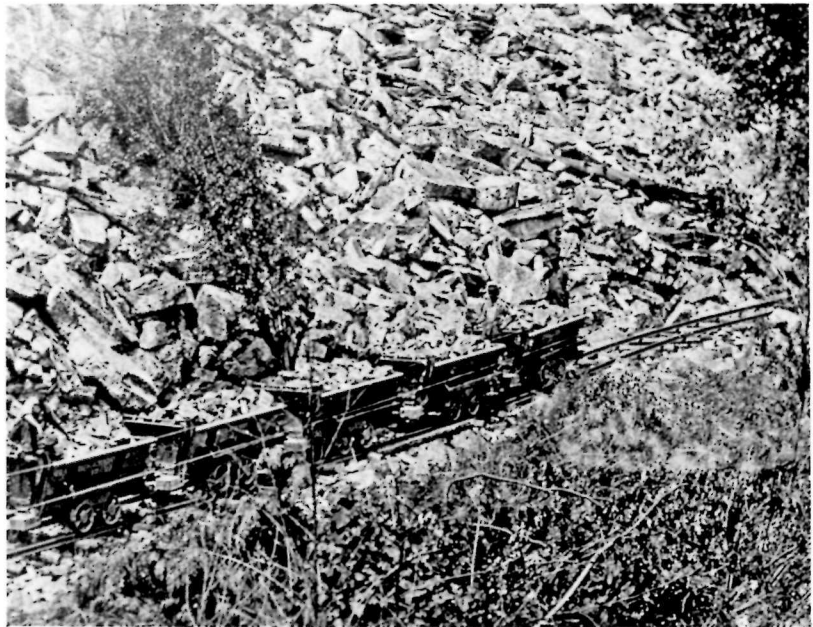


Fig. 3.82 Four miners and dinkey cars in a ganister floe near Mt. Union, ca. 1920. Collection of Huntingdon Co. Historical Society.

⁹⁰Thomas McGowan, interview by author, April 27, 1991. McGowan, a local historian, remembered being told by an old brickyard employee that there was once a strike at the plant, that a fence was built around it, and that one person was killed. The H-W correspondence includes a few letters from the time of the strike that refer to "the woman shot by the man in her house." Perhaps this is the death the brickyarder remembered, but the letters don't contain enough evidence to explain how or if the incident was connected to the strike.

⁹¹Interviews by author, Blandburg, Pa.: Thomas McGowan, April 27, 1991; Steve Andrews, June 13, 1991; Geraldine Sible, June 13, 1991; Lonnie Wilson, June 13, 1991.

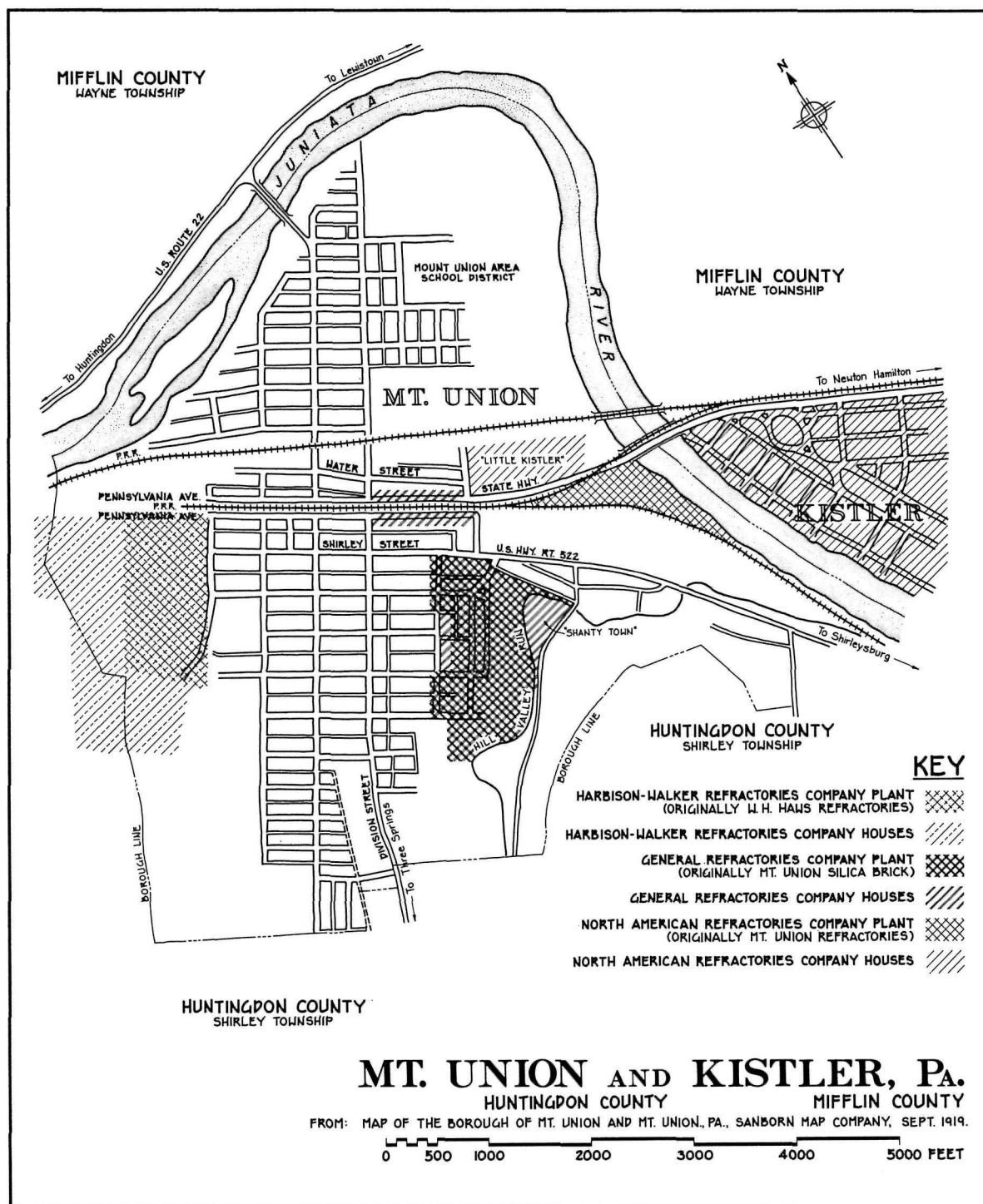


Fig. 3.83 Map of Mt. Union and Kistler along the Juniata River. Drawn by Isabel Yang.

in 1899 and was the first plant in the country built exclusively to manufacture silica refractories. Harbison-Walker planned the acquisition to diversify production. The Mt. Union plant site was an excellent choice--it was on a major rail line and had a virtually endless supply of raw material literally at its back door. (Fig. 3.82) Ganister rock covered the slopes of the surrounding

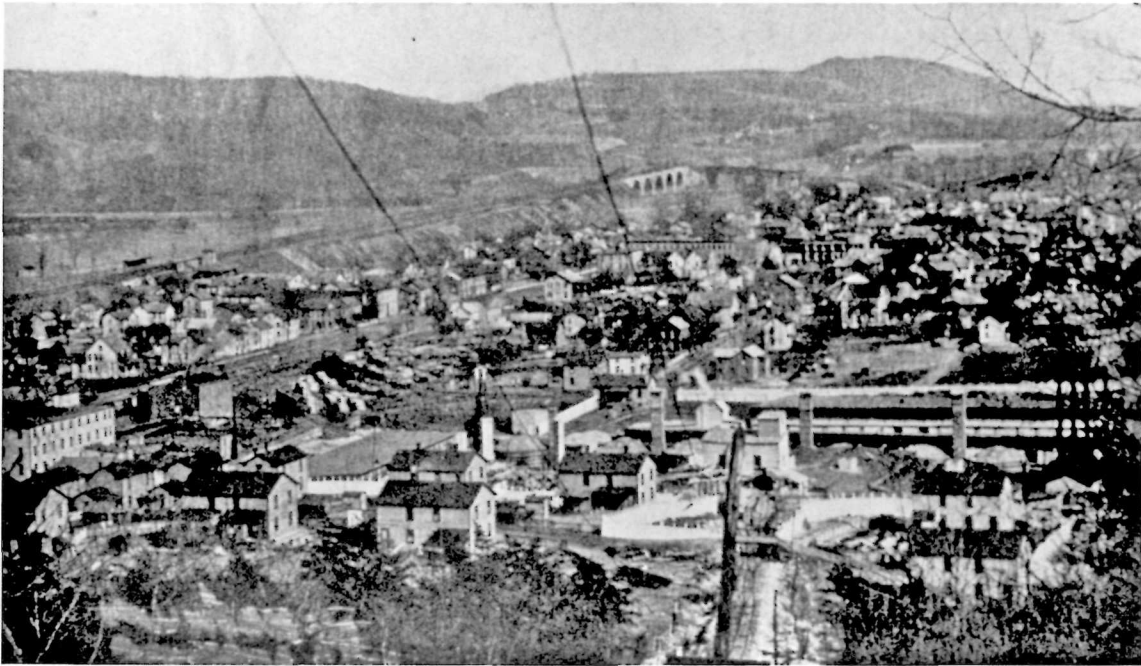


Fig. 3.84 View of Mt. Union from Ganister Hill, H-W houses and brickyard in foreground. Collection of Mt. Union Historical Society.

mountains that gave Mt. Union its name. The rock was plentiful enough to attract two more companies by 1911 and to support the construction of a satellite community, a model "industrial village" named Kistler.⁹² Mt. Union became a major site for silica brick production and was transformed into an urban industrial center standing in sharp contrast to its rural, agricultural context.



Fig. 3.85 John Sharrar house built along the Pennsylvania Mainline Canal, Mt. Union, ca. 1840. Photo by Jet Lowe.

Mt. Union

The first recorded settlement at Mt. Union was a store and a ferry across the Juniata River built there in the 1790s. The Pennsylvania Mainline Canal was routed along the river in 1829, and like Bolivar, Mt. Union began as a canal village. (Fig. 3.85) The site seemed promising enough by 1849 for

⁹²Frank J. Mulvihill, "Kistler Industrial Village," *The Wildwood Magazine* (Autumn 1916), 14-15, 36.



Fig. 3.86 Houses along the southwest side of Pennsylvania Avenue, Mt. Union. Photo by Jet Lowe.

speculators to lay out a town plan and offer lots for sale. The construction of the Pennsylvania Railroad in 1849-51 insured the town's future. By 1883 it was well established with a selection of shops and professional services, including a physician, dentist, insurance agent, and three churches--Presbyterian,



Fig. 3.87 Hotel and houses along the northeast side of Pennsylvania Avenue, Mt. Union. Photo by Jet Lowe.

Methodist, and United Brethren--to serve citizens who were primarily of German and Scotch-Irish heritage. The chief industry was A. D. Faust and Sons' tannery with "a capacity of 13,000 hides per year" and an employee roster of twenty-five men.⁹³

The Pennsylvania Railroad and the construction of branch lines to the north and south allowed entrepreneurs to exploit the natural resources of the Allegheny Mountains. Jesse L. Hartman, based in Hollidaysburg, Blair County, specialized in quarrying and owned mining

⁹³J. Simpson Africa, *History of Huntingdon and Blair Counties, Pennsylvania* (Philadelphia: Louis H. Everts, 1883), 353-56.



Fig. 3.88 Central National Bank, corner N. Jefferson and Shirley streets, Mt. Union. Photo by Jet Lowe.



Fig. 3.89 Shapiro Theatre, Shirley Street, Mt. Union. Photo by Jet Lowe.

rights to extensive limestone and sandstone deposits in Blair and Huntingdon counties.⁹⁴ His company was the primary supplier of ganister for the handful of refractories companies experimenting in the production of silica brick during the 1880s. Haws Fire Brick Company, based in Johnstown, held one of the claims for the first successful manufacture of silica brick and based on this

⁹⁴E. Moore and T. G. Taylor, *The Silica Refractories of Pennsylvania* (Harrisburg: Pennsylvania Geological Survey, 1924), 56-58. Thomas N. Kurtz, "History of Silica Brick," *Bulletin of the American Ceramic Society* 11 (January 1932), 31. Krause, 27.

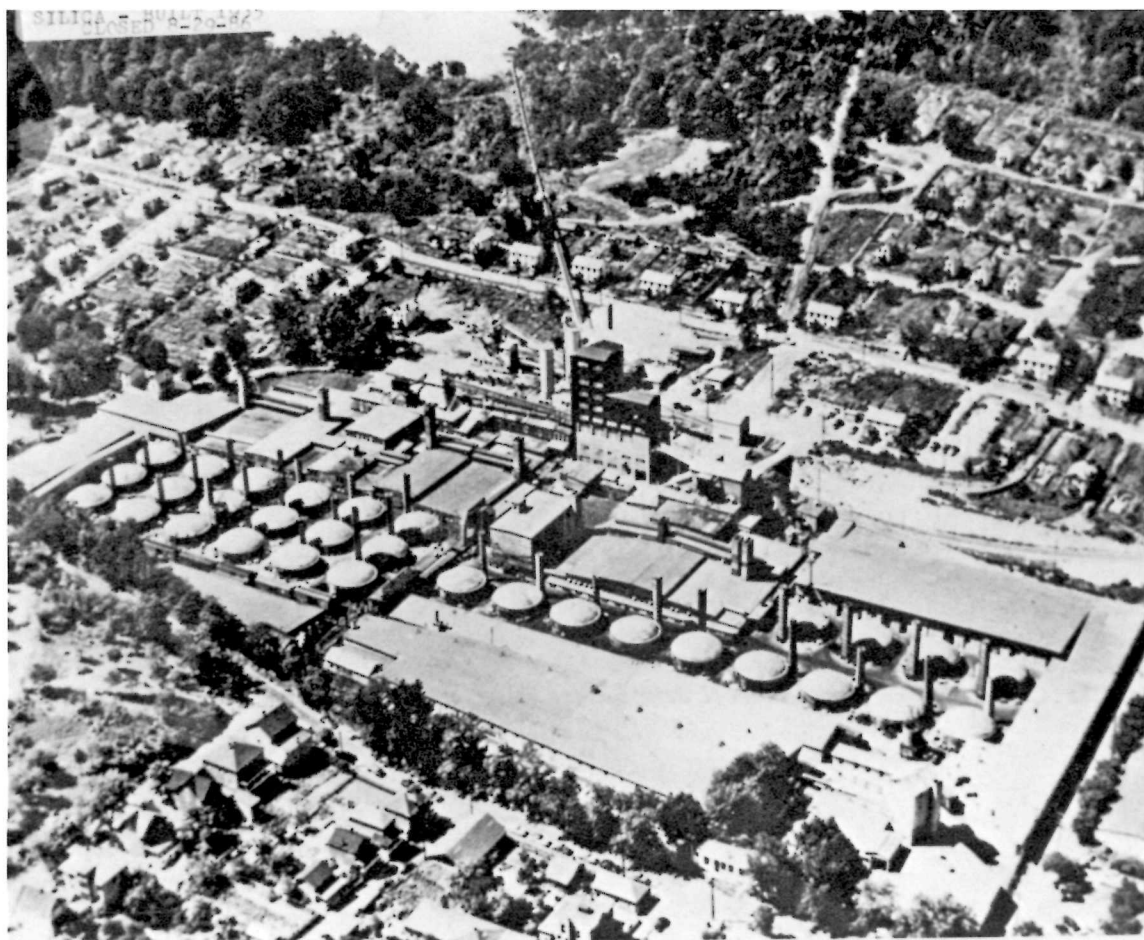


Fig. 3.90 Overview west of H-W plant and Ganister Hill houses, Mt. Union, ca. 1940s. Collection of H-W Retirees Committee.



Fig. 3.91 Harbison-Walker baseball team, ca. 1920. Collection of Mt. Union Historical Society.



Fig. 92 Harbison-Walker Refractories Company manager's house, 213 Shirley Street, Mt. Union. Photo by Jet Lowe.

experience, the company built a full-scale silica plant at Mt. Union bypassing suppliers like Hartman. Company miners brought ganister down from Jacks Mountain on counter-balanced dinkey cars. When Harbison-Walker Refractories bought the brickyard in 1902, its managers found the arrangement so successful that they had a second plant built, "the No. 2 works," in 1903-04, doubling capacity. By 1910, these works employed 600 men.⁹⁵

The two other Mt. Union brickyards were in a sense "spin-offs" of the first. Several of Haws' partners in the Mt. Union plant were unhappy with the terms of its sale to Harbison-Walker, and they financed a rival plant, Mt. Union Silica Brick, completed in 1901. In 1915 it was also sold, to General Refractories

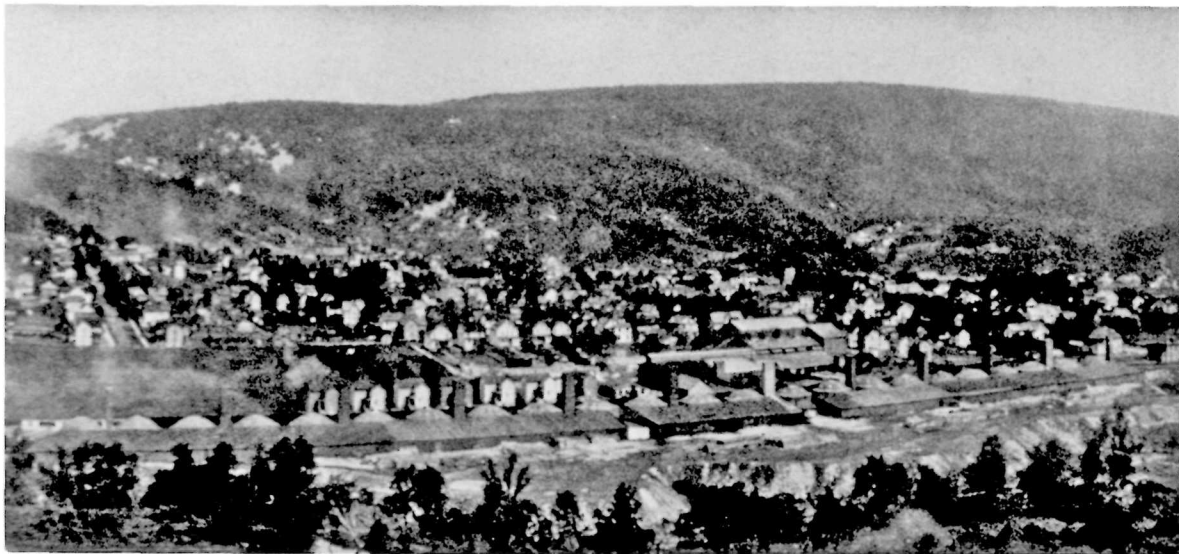


Fig. 3.93 Detail from panoramic view, Gen'l Refractories plant and row of seven co. houses by the kilns. Collection of Mt. Union Historical Society.

⁹⁵Kurtz, 26. Ramsay, 20. *A Bi-Centennial Keepsake* (Mt. Union Area Historical Society, 1976), n.p.



Fig. 3.94 General Refractories Mt. Union baseball team, "9-inch Sluggers." Collection of Mt. Union Historical Society.



Fig. 3.95 General Refractories Company houses, northeast side of Pennsylvania Avenue, Mt. Union. Photo by Jet Lowe.



Fig. 3.96 General Refractories Company houses, southwest side of Water Street, Mt. Union. Photo by Jet Lowe.



Fig. 3.97 Scrapbook photo of Ganister Hill. Collection of Harbison-Walker Retirees Committee.

which was expanding to take advantage of the increasing demand created by World War I.⁹⁶ (Figs. 3.93-96) The third company, Mt. Union Refractories, was organized by two former managers for Harbison-Walker, R. P. M. Davis and Clinton V. Hackman.⁹⁷ It was built in 1911-12 on the edge of town along the Juniata River and began operation with eight kilns. During World War I twenty-one more were built. In 1922 the company built a second plant in Clearfield County and changed its name to U. S.

Refractories Company. It was merged with North American Refractories in 1930.⁹⁸

While the brickyards stimulated Mt. Union's development, their influence was significantly compounded by the opening in 1915 of the Etna Explosives Company's powder plant just across the river from Mt. Union. It ran twenty-four-hour shifts and employed at least 1,000 men and women until closing at the end of 1918 after the World War I armistice. The combined employment of the brickyards and powder plant was around 3,000, a drastic increase from the twenty-five

⁹⁶"The General Refractories Company," *Bulletin of the American Ceramic Society* 22 (November 15, 1943), 364. "The General Refractories Co.," *Grefco Press* 1 (August 1946), 1.

⁹⁷Trisha Colyer, "Company town of Kistler was dream of Hackman, who worked to build NARCO," *The Valley Log* (May 9, 1990), 18. R. P. M. Davis appears occasionally as a correspondent (as superintendent at the Farrandsville plant) in the Harbison-Walker-Blandburg correspondence during the 1903 strike.

⁹⁸Taylor and Moore, 44-45. "History of the North American Refractories Company Mt. Union Plant," typescript, 1.



Fig. 3.98 Western Auto building formerly H-W company store, Shirley Street near Mt. Union brickyard entrance, looking southeast. Photo by Kim Wallace.



Fig. 3.99 Foreign Supplies Store near Harbison-Walker brickyard entrance, Shirley Street, Mt. Union, looking northwest. Photo by Jet Lowe.

men working at the tannery thirty-five years earlier. The population of the town more than tripled, rising from 1,086 in 1900 to 3,388 in 1910. The sometimes makeshift and disreputable services and entertainments established to take advantage of the spending power of Mt. Union's new and often temporary citizens earned it a local reputation as "a racketeering borough . . . a second Sodom and Gomorrah."⁹⁹

Because labor and housing were in high demand, each of the four companies built housing to attract workers. The type of housing each built suggests something about the kind of workers they expected and wanted to attract. The explosives company built a few single-family houses for its managers and several two- and three-story barracks-type buildings for the rest of its employees. Jobs in the munitions factory were high-paying, but they were also high-risk and short-term. They attracted mostly single men who

came from a wide radius around Mt. Union and found the group living arrangement sufficient for their stay. The local newspaper complained in 1916 that the munitions plant had attracted too

⁹⁹"World War I Powder Plant in Mifflin County," Mifflin County Historical News (September 1984), 3. Bi-Centennial Keepsake, n.p. Mt. Union Times (February 24, 1911). James Thomas McElroy, Jr., McElroy's Family Memories (1930), 270.

many people to town who did not have local family connections and created disturbances in their leisure time.¹⁰⁰

The refractories companies expected to continue operations after the war was over; they wanted to hire family men who were assumed to be more stable and dependent on an income and who would contribute to the community and create a renewable work force of friends and family members. Refractories company housing was all designed for families and longer-term residence, but except for this basic profile, each company's housing was different. In 1911 Harbison-Walker owned 104 houses. All were two-story frame buildings; twenty-seven were duplexes. All but three were grouped on the sloping hillside around the south and west side of the plant to form a neighborhood called Ganister Hill. (Figs. 3.84, 90, 97) General Refractories, a smaller plant with fewer employees, owned forty-one houses scattered in four different areas: two rows of one-and-a-half-story, gambrel-roofed houses along east Water Street and Pennsylvania Avenue (Figs. 3.95-96); a row of seven two-story, L-plan houses adjacent to the plant on Wausau Place (Fig. 3.93); six frame houses on Shirley Street; and twelve one-story "shanties" across Hill Valley Run east of the plant in a neighborhood called Shantytown.¹⁰¹ (3.83)



Fig. 3.100 SS. Peter and Paul Orthodox Church, N. Jefferson and Sherman, Mt. Union, built 1915-16, by east European immigrants. Photo by David Ames.

While General Refractories' organization and variety of housing forms showed little concern for consolidation and uniformity, the houses Harbison-Walker built on Ganister Hill were of only two different types and were rationally ordered around the hillside, suggesting a more explicit policy of supervision of the workforce. And, in fact, the local newspaper praised the company in 1916 for believing it was "their duty to care for the general welfare of their people" and for inaugurating "an uplift program" among them. The company's employees, the paper reported, included "Slavish, Roumanians, Bulgarians, Italians, Greeks and Serbians" as well as "native Americans, and southern Negroes." (Figs. 3.99-101) Housing was considered to have an integral role in the "program" of social and cultural transformation: "the employees and their families should be comfortably and decently housed; and . . . they should be encouraged to keep

¹⁰⁰*Mt. Union Times* (November 19, 1915). *Twice-A-Week-Republican* (January 7, 1916).

¹⁰¹*Mt. Union* (Sanborn Map Company, 1919). Tax assessment records.

their houses as nicely as possible." The houses were described as solid frame structures, nicely painted and slate roofed. The interiors were painted and papered, with porcelain sinks and city water, and there were plans to have them "electrically lighted and scientifically sewered."¹⁰²



Fig. 3.101 Mt. Hope Baptist Church, Chestnut and Division streets, Mt. Union, built 1921 by African-American residents. Photo by Kim Wallace.

The supervision and improvement of "home life" included a policy of curtailing alcohol consumption. Employees who flagrantly ignored admonishments to abstain were fired. The newspaper judged that the company's efforts were meeting with success:

the families are rising in intelligence and are more encouraged and are acquiring a desire for a better home life . . . the moral tone is improving. There is in our opinion, a compensation to the Company in better service from the men, as well as in the consciousness of a valuable service to the laborers and to their wives and children.¹⁰³

Other organizations in the town also joined the company's effort. The Red Cross sponsored an "Americanization

Program" that included instruction in domestic skills such as sewing, fancy work, and cooking.¹⁰⁴ The sudden influx of so many people whose ways of speaking and living were literally foreign to longer-term Mt. Union residents must have been disturbing, and the response to try to make the newcomers less challenging and more controllable by "uplifting" them into a safe, more respectable social category was common throughout the country.

Kistler

The third refractories company went to unusual lengths to provide an uplifting environment for its workers. In 1916, four years after its plant opened, Mt. Union Refractories began construction of a company town. (Figs. 3.102-04) Instead of assigning the task to company carpenters and engineers or hiring a local contractor to build rows of utilitarian

¹⁰²"Visit to Harbison-Walker Works," Twice-A-Week-Republican (January 28, 1916).

¹⁰³Ibid.

¹⁰⁴"American Red Cross Americanization Program," Mt. Union Times (September 4, 1924).

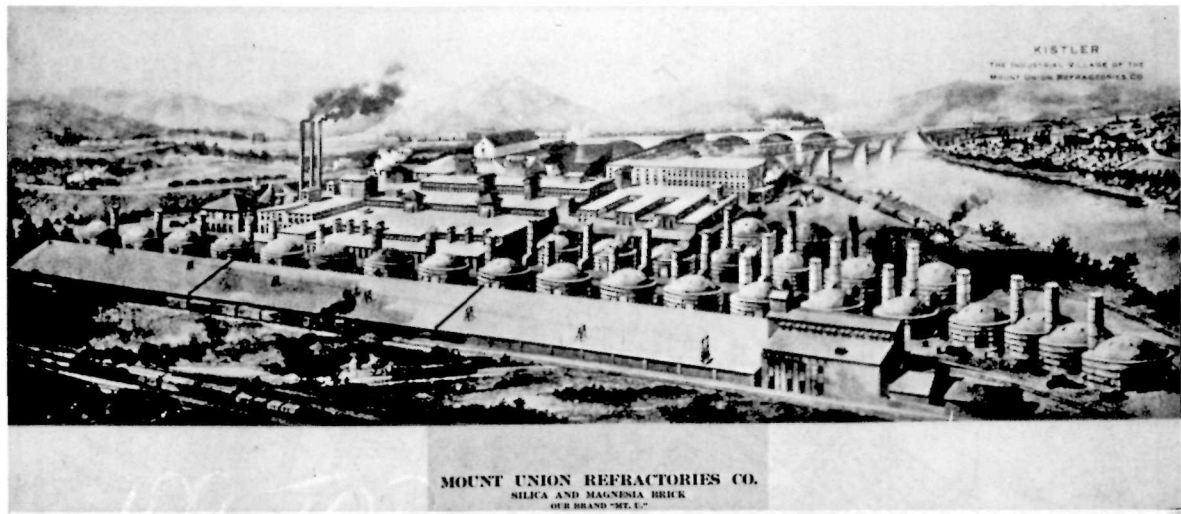


Fig. 3.102 Postcard view of Mt. Union Refractories and its "industrial village" at right. Collection of Huntingdon County Historical Society.

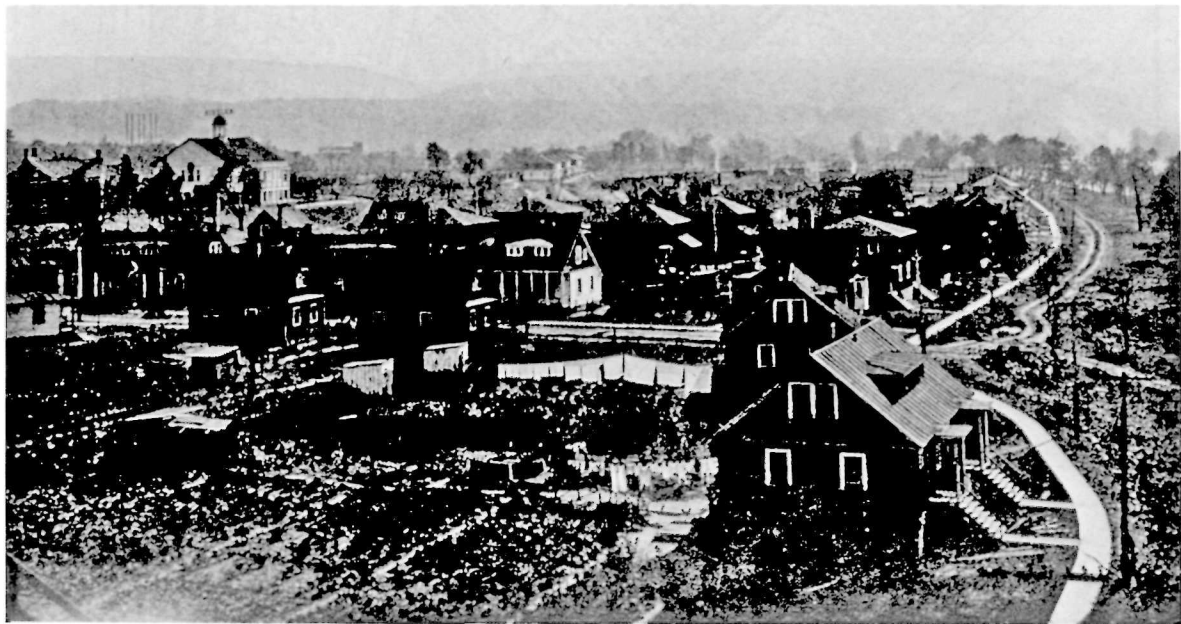
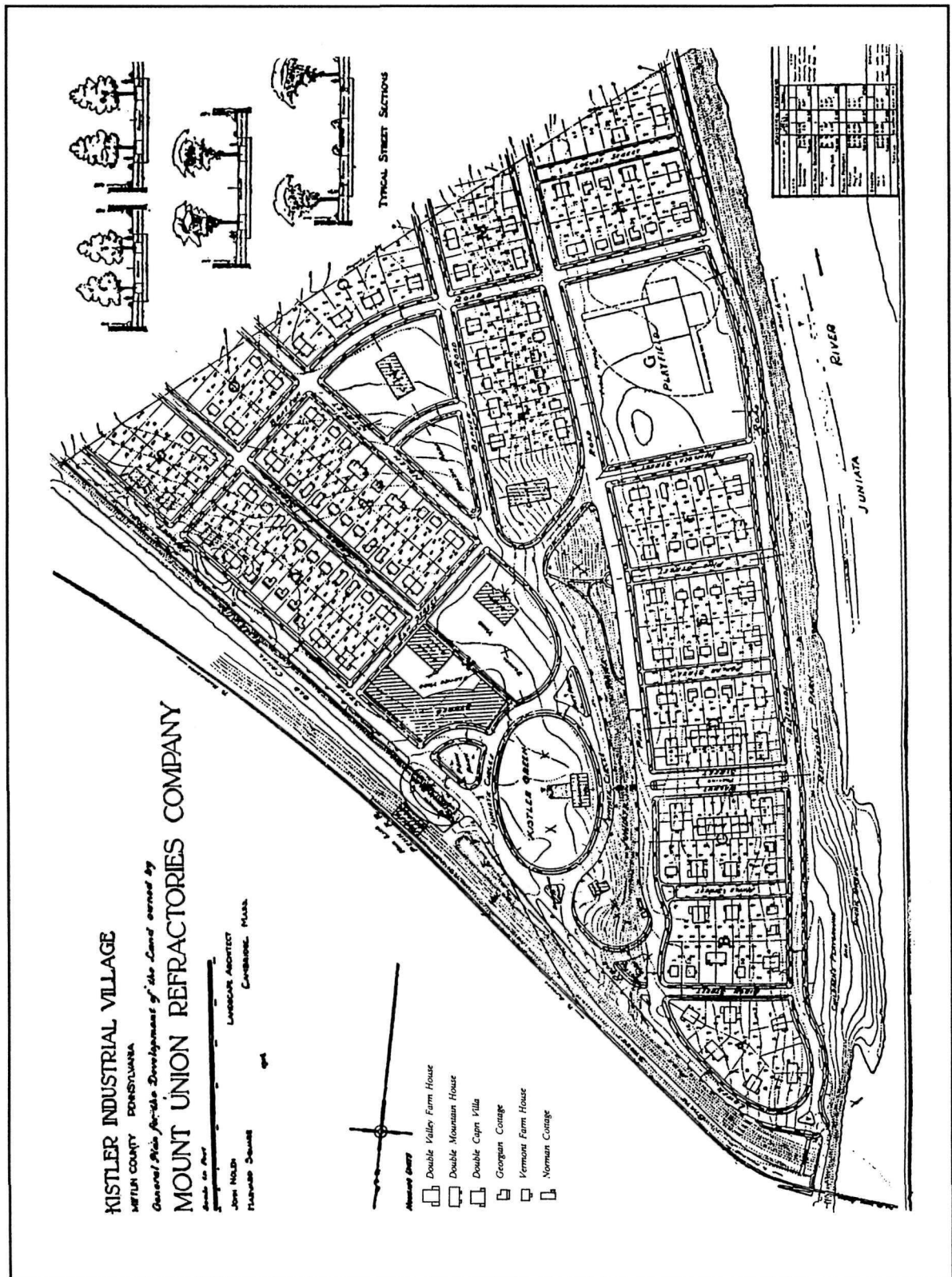


Fig. 3.103 View of Kistler from bridge over the Juniata, ca. 1920. Collection of Huntingdon County Historical Society.

vernacular houses, the company commissioned John Nolen, a prominent landscape architect and planner, to design a model "industrial village." Mann and MacNeille, a New York architectural firm experienced in the field of industrial housing, provided the building designs. Company president Clinton V. Hackman "wanted to see his men live on as high a plane as their incomes would allow,"¹⁰⁵ and perhaps as ex-Harbison-Walker employees, he and R. P. M. Davis

¹⁰⁵"Company town of Kistler" *The Valley Log* (May 9, 1990), 18.



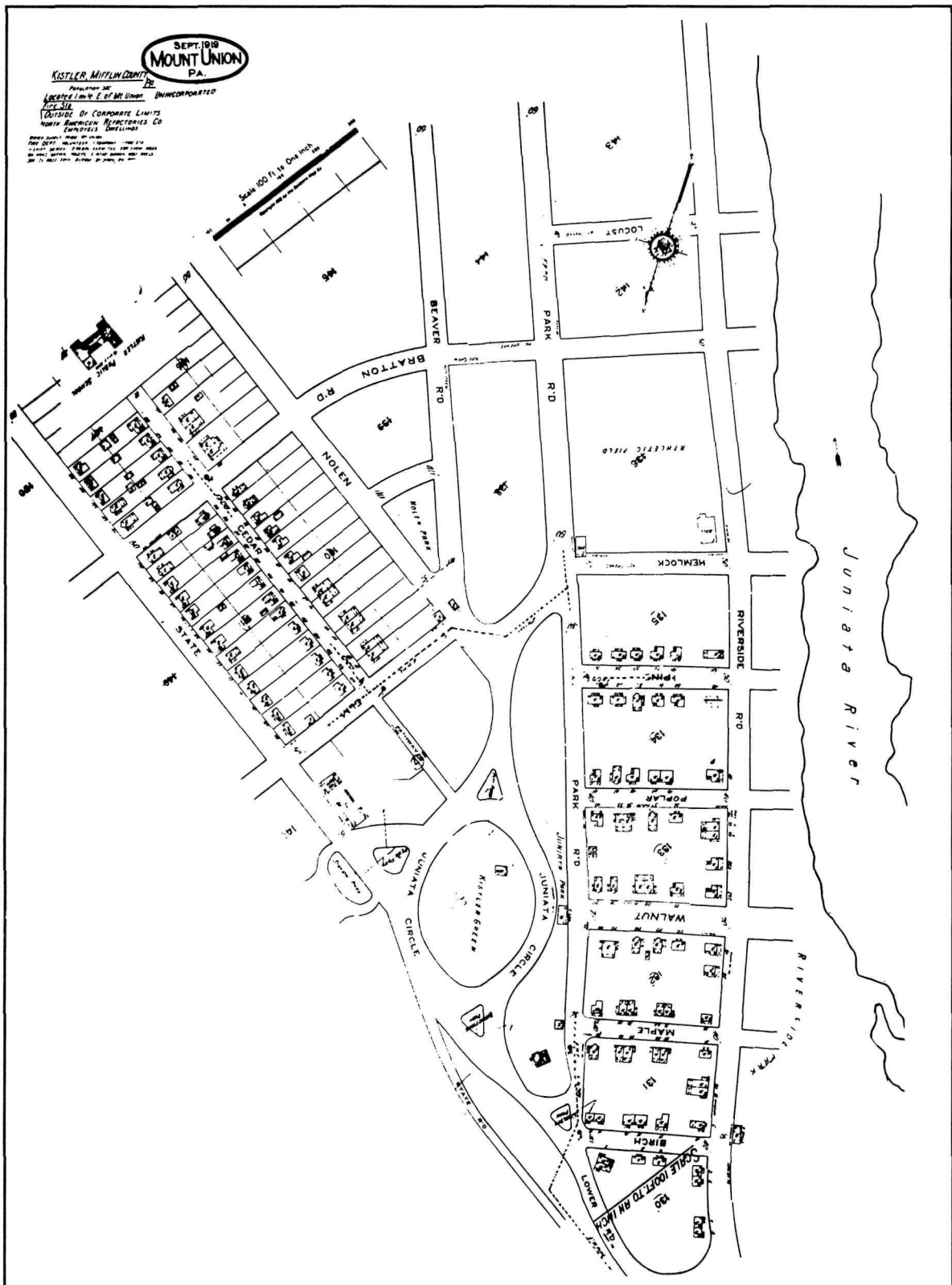


Fig. 3.105 Sanborn insurance map of Kistler showing actual construction, 1919.

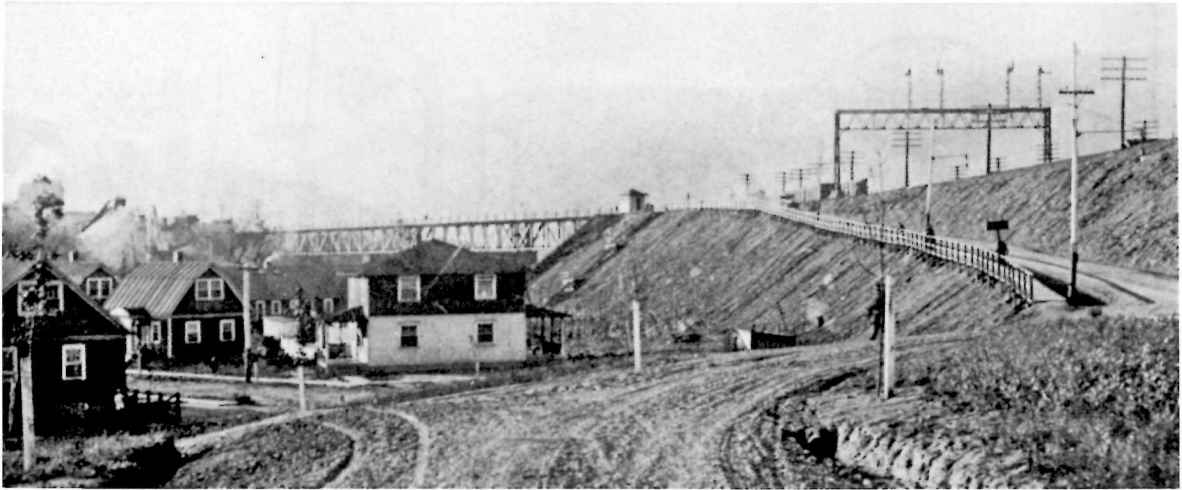


Fig. 3.106 Ca. 1920 view of Birch St., Kistler and bridge over the Juniata. Collection of Huntingdon County Historical Society.



Fig. 3.107 View of Birch St., Kistler, 1989. Photo by Jet Lowe.

wanted their residential property to stand out as a distinctive cut above the ordinary company housing of their former employer and of their industry in general.

Their choice of planner assured them of receiving a design that was not only stylistically fashionable but also one that was accompanied by an intellectually rationalized social purpose. Nolen made a career of designing and writing about model towns. The town Hackman and Davis named Kistler was a minor assignment in a long list of commissions for municipalities, individuals, and institutions as well as companies. Nevertheless, Nolen included a chapter on Kistler in a collection of his essays. He described the triangular-shaped town site as bounded on one side by the Pennsylvania Railroad and separated from the "dirt, dust, and noise" of the works by the Juniata River on another. (Figs. 3.104-06) A brick farmhouse and barn already on the site were incorporated into the plan. (Figs. 111-12) The Pennsylvania bank barn was

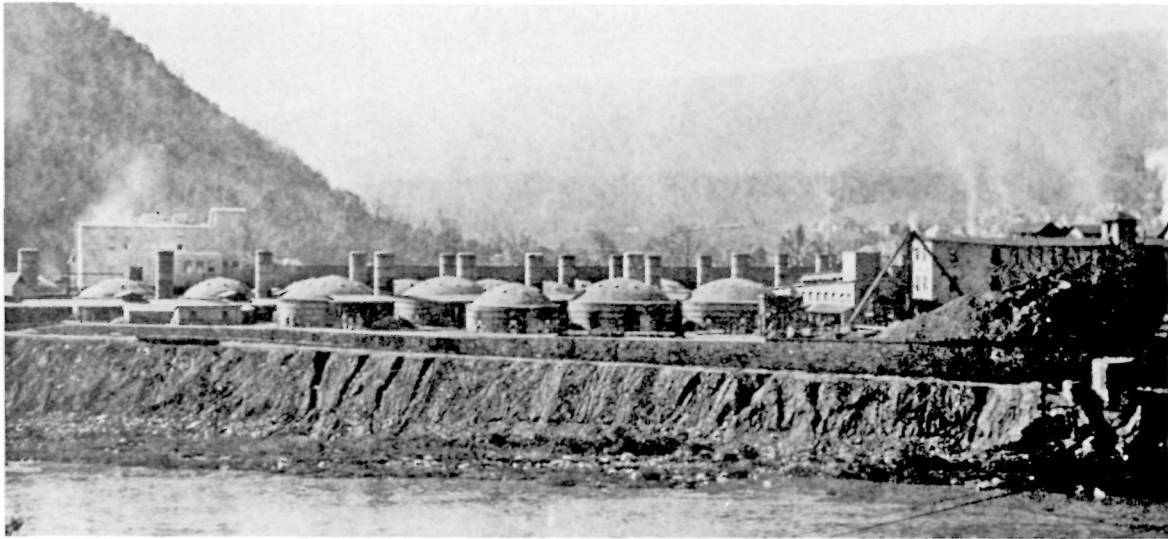


Fig. 3.108 View across Juniata River from Kistler of Mt. Union Refractories plant, ca. 1920. Collection of Huntingdon County Historical Society.

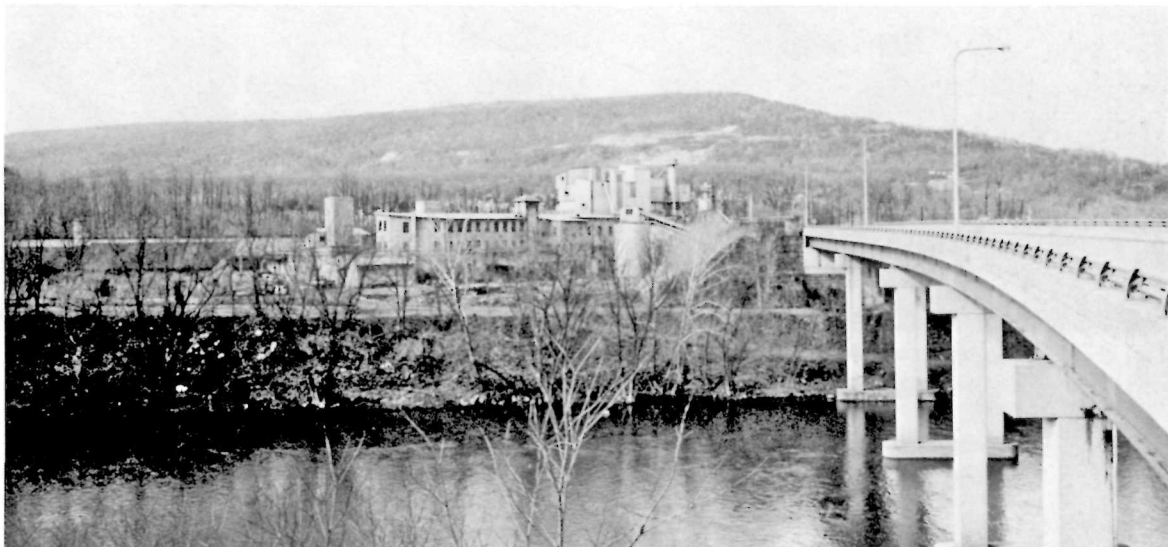


Fig. 3. 109 View of brick plant from Kistler, 1989. Photo by Jet Lowe.

remodelled to serve as the community building on Kistler Green, a focal point of the asymmetrical plan. Nolen's plan included four other public buildings spaced across the center of the village plan--two churches, a railroad station, and a store.¹⁰⁶ (Figs. 3.104-05) Only one of these was built, however, a combination store, school, and residence sited along the state road across Kistler Green from the community building. (Figs. 3.113-14) It was demolished in 1990. Like the barn with its cupola and Palladian windows, the store/school was given colonial-revival

¹⁰⁶John Nolen, "A Village for Factory Workers" in *New Towns for Old: Achievements in Civic Improvement in Some American Small Towns and Neighborhoods* (Boston: Marshall Jones Company, 1927), 66-69. Mulvihill, 14-15, 36.

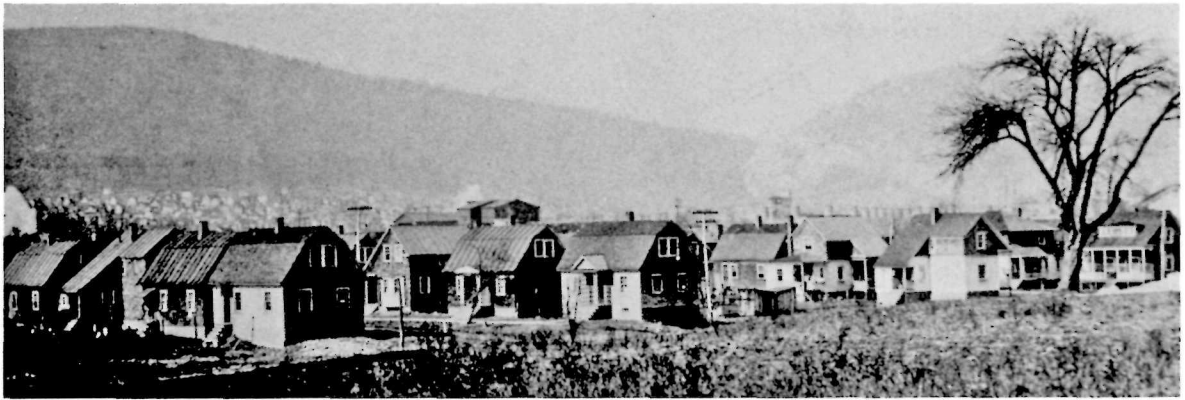


Fig. 3.110 View across lower Kistler towards plant (kiln stacks at right) and Mt. Union, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.111 Farm house and barn converted into Kistler community building, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.112 Kistler community building, looking northeast, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.113 Kistler company store and school building, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.114 Kistler company store and school building, 1989; demolished in 1990. Photo by Jet Lowe.

details, but even more than the barn/community building, it had the proportions and stylistic composition of a vernacular building. Perhaps the local contractor was instructed to combine several functions in one building and created this building with stylistic elements inspired by the architects' plans for those that were not built. It did resemble Mann and MacNeille's design for other large-scale buildings (Fig. 3.115), but their usual colonial symmetry and textbook design elements were compromised in this building by such things as the open bracketed cornice, window sizes and placement, and an awkwardly executed central entrance.

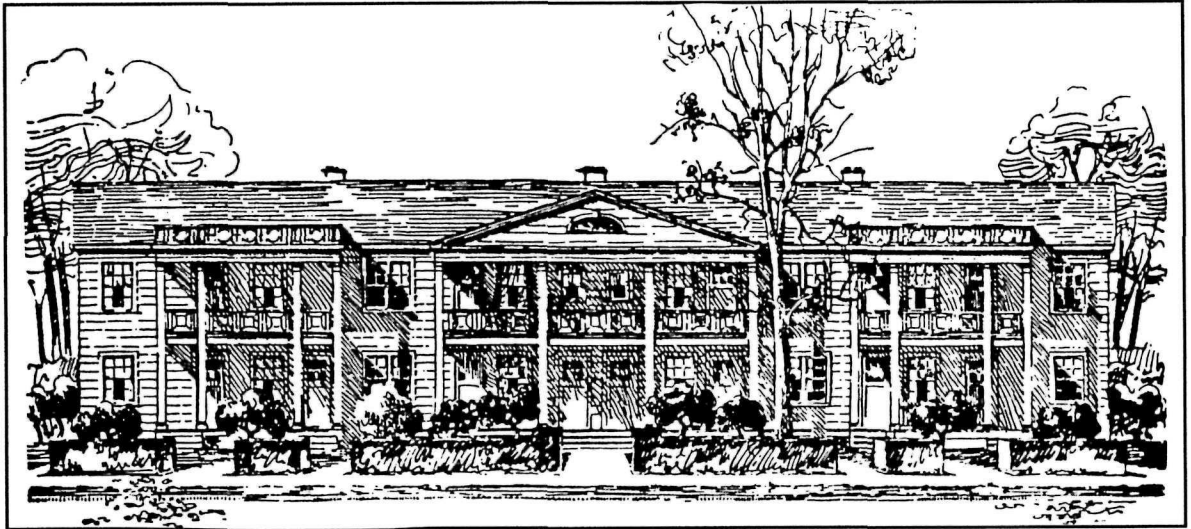


Fig. 3.115 Apartment house designed by Mann and MacNeille for the company town of Bristol, Pa. *American Architect*, 5/15/1915, 603.



Fig. 3.116 Detail from panoramic view of Kistler from Mt. Union, ca. 1920. Collection of Huntingdon County Historical Society.

Although Nolen's overall street plan was carried out, there were additional discrepancies between the residences on the plan and in the village as it was built. Of the 111 residences recorded in Kistler in 1919 by the Sanborn Map Company, ten were designed to house four families, twenty-one were double houses, and eighty were single-family houses. The four-family buildings did not appear on the Nolen plan. They were set apart at the southern end of the village and were torn down in the 1930s. (Figs. 3.105, 3.116) Conversely, his plan does show six multi-family residences on Walnut Street that were not built.¹⁰⁷

The placement of double and single-family houses did not follow Nolen's recommendations, but their forms appear to be consistent with the six Mann and MacNeille

¹⁰⁷Nolen, 68. "Kistler" in *Mt. Union* (New York: Sanborn Map Company, 1919).



Fig. 3.117 *Double Mountain style houses, Kistler.* Photo by Jet Lowe.



Fig. 3.118 *Double Capri Villa style house.* Photo by Jet Lowe.

designs listed in the plan's key. There were three designs for double houses, and three for one-and-a-half-story, single-family houses. The "Double Valley Farmhouse" is a two-story building with a square plan, pyramid roof, and side entrance porches. The "Double Mountain House" is rectangular in plan with a side-gable roof, shed roof dormer, and front entrance porches.

(Fig. 3.117) The "Double Capri Villa" has a two-story rectangular plan, hipped roof, and side entrance porches. (Figs. 118-19)

The "Georgian Cottage" is one-and-a-half-story, L-shaped in plan, with a side-gable roof that extends over a full-width porch and central entrance.

(Fig. 3.120) The "Vermont Farmhouse" has a rectangular plan, gambrel roof, a central entrance, and a stoop with either a segmental- or pediment-

arched roof. (Figs. 3.121-22) The "Norman Cottage" is rectangular in plan with a front projecting bay and a front-gable roof that extends over a side entrance porch. (Figs. 3.123-24) On the Nolen plan these house types were arranged in symmetrical groups. As built they have a more random placement, although they also tend to be grouped in rows of the same plan.¹⁰⁸ (Fig. 3.125)

Nolen's and his architects' design philosophy was based on the belief "that housing is something more than an incident in the life of the worker." (Figs. 3.127, 130) Informed civic planning and "suitable and healthful homes" could help "to cultivate a spirit of citizenship and

¹⁰⁸Ibid. Nancy S. Shedd et al., Huntingdon County, Pennsylvania: An Inventory of Historic Engineering and Industrial Sites (Washington, D. C.: Historic American Buildings Survey/Historic American Engineering Record, National Park Service, 1991), 137.



Fig. 3.119 View southeast down Cedar Street to future school site, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.120 View north on Riverside Road, Kistler, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.121 View down Cedar St. at Elm St., Vermont Farmhouse style houses, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.122 View down Cedar St. at Elm St., Vermont Farmhouse style house, 1989. Photo by Jet Lowe.



Fig. 3.123 Norman Cottages (right) and Georgian Cottages (left) on Cedar St., Kistler, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.124 Norman Cottages, Cedar St., Kistler, 1989. Photo by Jet Lowe.



Fig. 3.125 Streetscape, Kistler, ca. 1920. Collection of Huntingdon County Historical Society.

social life among the inhabitants." This was especially important in Kistler, Nolen wrote:

The population being so largely foreign in its make-up, there is distinct necessity for a lead to be given in the direction of Americanism. This is done in a much better way than by exhortation--by the provision of something tangible, in the form of good living conditions, which more nearly express the ideals of this country.

Kistler's "foreign" residents, like Mt. Union's, included East European immigrants and African-Americans recruited from the area around Saluda, South Carolina.¹⁰⁹

The housing for refractories workers at Kistler aspired to a higher standard of living by the inclusion of indoor plumbing and bathrooms and a more formal, middle-class floor plan that included both a living room and dining room as well as a kitchen on the first floor. (Fig. 3.126) The scale of many of the houses was sometimes so small, however, that the space designated as the dining room was not large enough for a dining room table, and with children and boarders, the residents' needs for living and sleeping space often dictated more practical uses of any extra rooms.¹¹⁰ The houses were dressed up in colonial-revival and vernacular styles to convey the values of steady, upright Americanism. The six house plans were given names such as Vermont Farmhouse and Norman Cottage that evoked a romantically rustic and noble work ethic heritage

¹⁰⁹Nolen, 73-74. Although no strict segregation was reported in Kistler, most of the African-American families lived on Pine Street. Mary Alexander, interview by Margaret Mulrooney, Kistler, Pa., March 29, 1989. Ressie Costlow, interview by Margaret Mulrooney, Kistler, Pa., March 30, 1989.

¹¹⁰Mary Alexander, interview by author, Kistler, Pa., June 11, 1991.

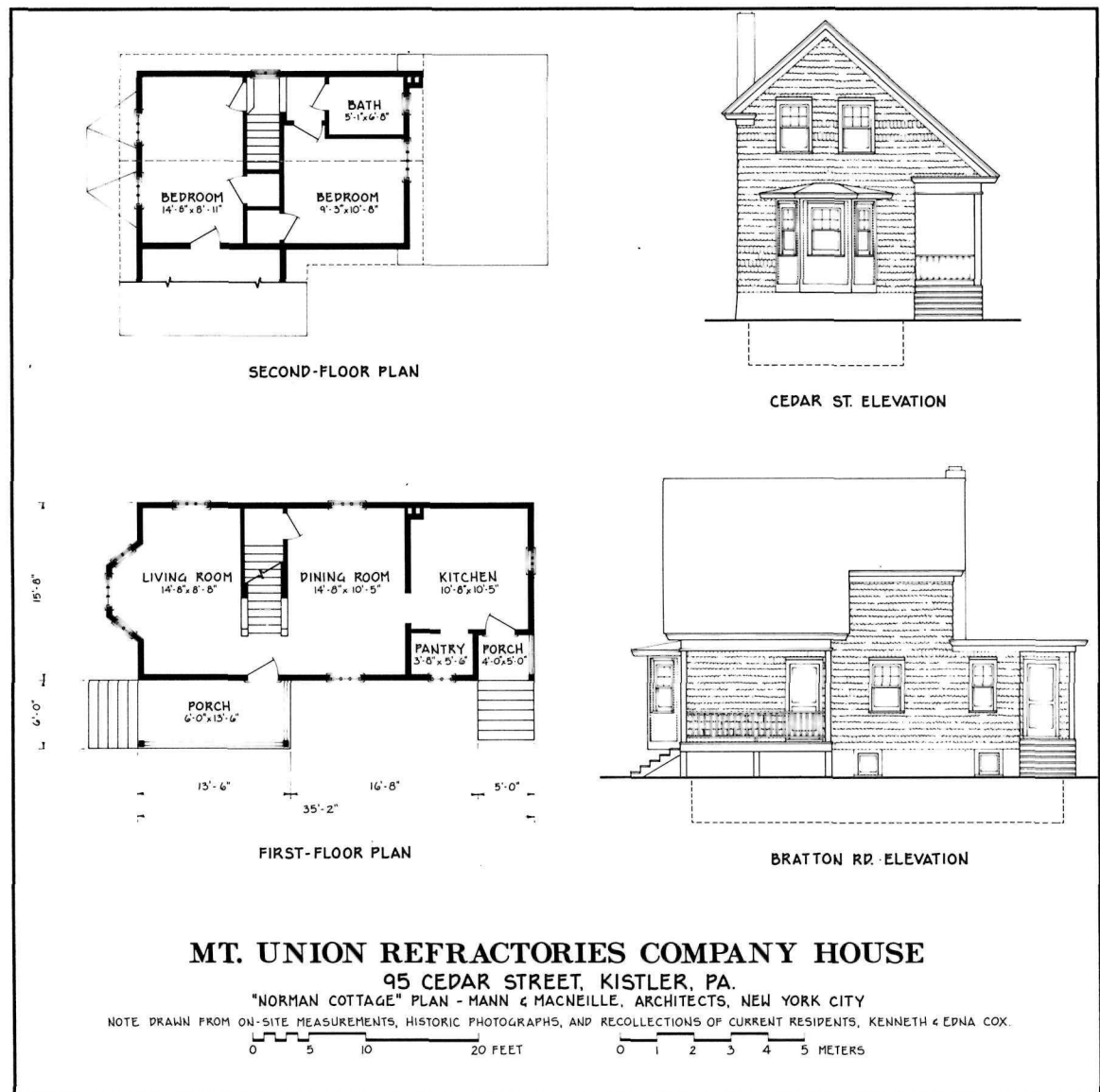


Fig. 3.126 Plans and elevations of 95 Cedar Street, Kistler, a Norman Cottage style house. Drawn by Isabel Yang.

far removed from any association with the urban, industrial world.

This physical framework for redeeming social and home life was complemented by educational and social welfare programs documented in a set of photographs taken in Kistler about 1920. (Figs. 3.127-39) The photographs show brickyard and street views, buildings, garden plots, and children in the playground on Kistler Green. A store and school were housed in the village's second public building located along the state road across the green from the community building. There are photographs of grade school age children in a classroom setting and of adult women in what appear to be sewing and knitting classes. Another shows a nurse attending an African-American family's infant, and in another, young girls practice nursing skills. The company employed several women as teachers and as nurses for the community and the



Fig. 3.127 Workers at the kilns, Kistler brickyard, ca. 1920. Collection of Huntingdon County Historical Society.

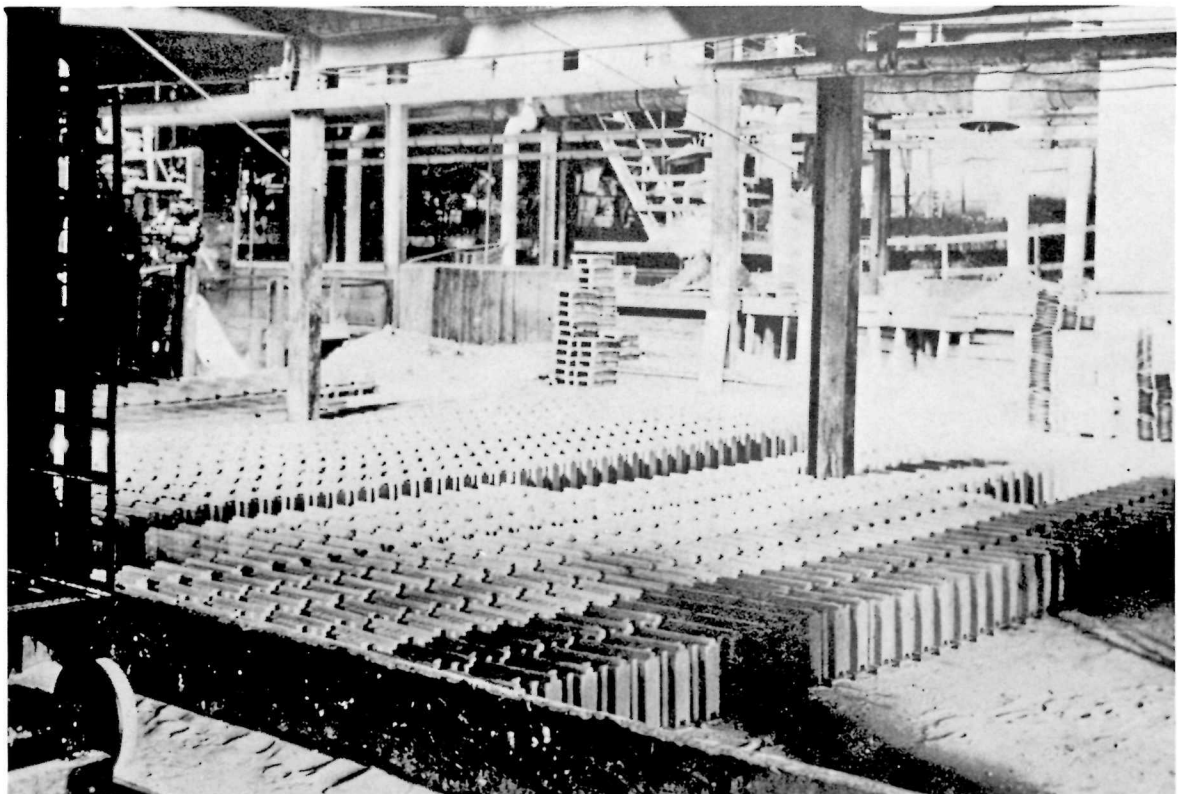


Fig. 3.128 Interior view, Kistler brickyard, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.129 Kistler brickyard, Mt. Union Refractories Company, ca. 1920. Collection of Huntingdon County Historical Society.

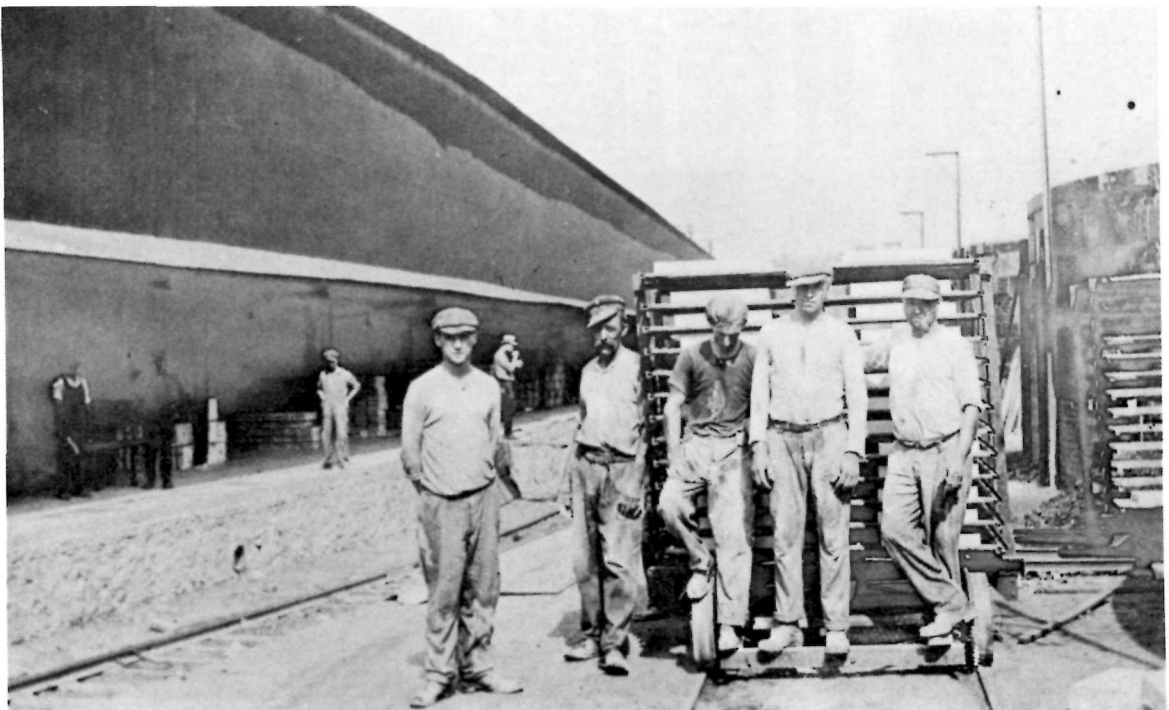


Fig. 3.130 Workers at the brickyard, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.131 Kistler Fire Company, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.132 Residents posing at garden plots, Kistler, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.133 *Children in the playground at Kistler, ca. 1920.* Collection of Huntingdon County Historical Society.



Fig. 3.134 *Elementary school students posed outside the Kistler community building, ca. 1920.* Collection of Huntingdon County Historical Society.



Fig. 3.135 A teacher instructs students in a sewing class at Kistler, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.136 Women in a knitting class, Kistler, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.137 *Company nurse with infant and family at Kistler, ca. 1920.* Collection of Huntingdon County Historical Society.



Fig. 3.138 *Girls practice nursing skills, Kistler, ca. 1920.* Collection of Huntingdon County Historical Society.



Fig. 3.139 Houses on Walnut Street, Kistler, ca. 1920. Collection of Huntingdon County Historical Society.



Fig. 3.140 Houses on Walnut Street, Kistler, 1989. Photo by Jet Lowe.

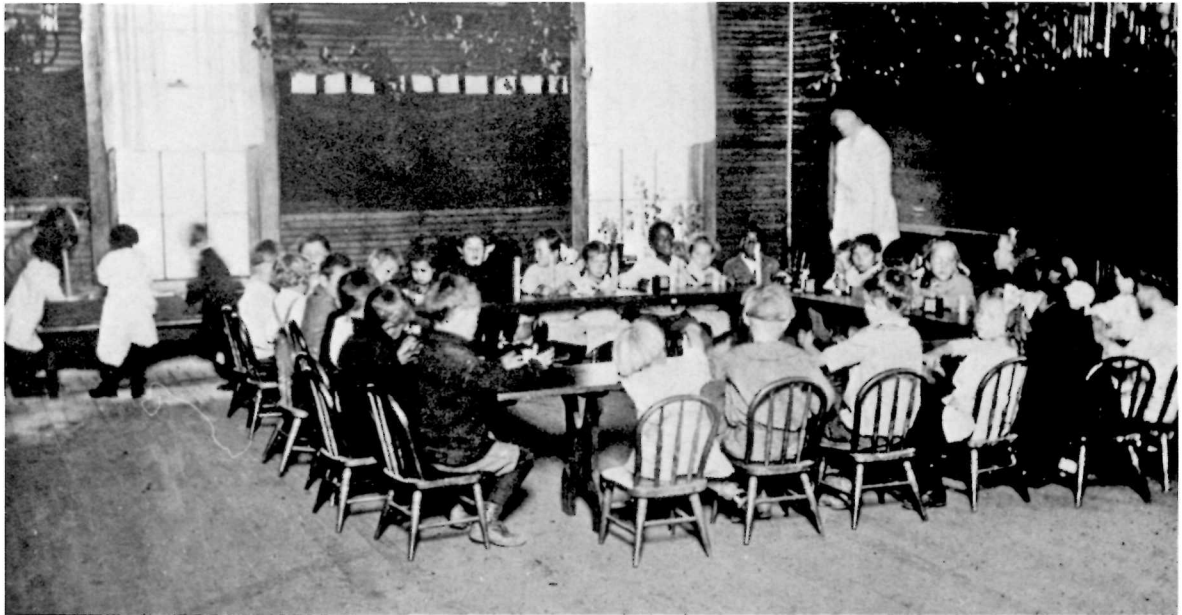


Fig. 3.141 Elementary school class at Kistler, ca. 1920. Collection of Huntingdon County Historical Society.

brickyard. They and other single women who worked in the company office lived in the "girls' club house," a double house on Cedar Street.¹¹¹

It is unclear whether these social programs and services lasted through the 1920s, but company oversight was certainly still active. By 1924 Wayne Township operated the Kistler school, renting the three large rooms on the second floor above the company store. There were plans to build a public school in Kistler in 1924, but U. S. Refractories' president R. P. M. Davis objected strongly to the school board's choice of a "portable, ready-made building." He did not think it "adequate or appropriate" for a town designed by renowned architects and landscaped with thousands of dollars of trees and shrubs so that it "will become more and more beautiful":

Kistler as a model town is famous--frequently letters are received from all over the United States and from different countries of Europe asking about the plans and the history of the town of Kistler. To erect a squatty, ready-made, ugly school building right in the center of Kistler would be a great misfortune.

To block the school, he had Kistler incorporated as a borough so that its school administration was separate from the township, and classes continued to be held in the company's building.¹¹²

¹¹¹"Plan for Kistler," in Nolen, *New Towns for Old*. Map of Kistler in *Mt. Union* (Sanborn Map Company, 1919). Kistler photographs, Huntingdon County Historical Society. Margaret Fazenbaker, interview by Margaret Mulrooney, Kistler, Pa., March 31, 1989. Mary Alexander, interview by author, Kistler, Pa., June 11, 1991. Philomena Kurtz, interview by Margaret Mulrooney, Kistler, Pa., March 31, 1989.

¹¹²"Kistler Will Become A Borough," *Mt. Union Times* (September 4, 1924).



Fig. 3.142 Kistler elementary school built by the Works Progress Administration. Photo by Jet Lowe.

A substantial brick school building was built at the end of Cedar Street in 1936 with the aid of the Works Progress Administration. (Fig. 3.142) The community building, which held a theater, poolroom, and dance hall, burned in 1933 and was not replaced. One resident reported that in its last years, she visited the building only for voter registration. The company store was sold in the early 1940s to George Sadasuk, and in 1944 the first two houses were sold, to residents Superintendent Edgar Kurtz and his brother-in-law, William Ray Hoenstine. The houses were all in private hands by 1949.¹¹³

The majority of the original houses have been remodeled in some way, with additions, enclosed porches, and aluminum or vinyl siding (Figs. 3.143, 4.16-17), but there are still a few, such as 95 Cedar Street (Figs. 3.126, 3.144, 4.27), whose original shingle siding and white trim have been maintained. The small lot sizes have generally precluded ambitious expansion of houses or infill, although a few house trailers have been added to the town--one on Cedar Street, another on Pine Street, and two more on the corner plot at Riverside Drive and Birch Street where one house burned and another was torn down. In the 1970s the Kistler Volunteer Fire Company built a two-story, concrete-block fire hall in the center of town. It replaced a shed in which a pull-type fire engine was once kept. The 1936 school still serves as the Kistler elementary school. The mayor and council hold monthly meetings in the elementary school or the fire hall.¹¹⁴ The store building was vacant and deteriorated in the late 1980s and was demolished in 1990. A ranch house was built on the site. Several other ranch and split-level houses were built along Beaver Road where the quad houses once stood.

¹¹³Shedd et al., 138-39. Tax assessment records, Wayne Township and Kistler, Mifflin County. Ressie Costlow, interview by Margaret Mulrooney, Kistler, Pa., March 30, 1989. Philomena Kurtz interview.

¹¹⁴"Kistler Hires New Secretary-Treasurer," *The Daily News* (February 17, 1989), 3.

Kistler and Mt. Union

Kistler's brickyard was incorporated into the holdings of North American Refractories in 1930, and it continued to operate after the houses were sold. In Mt. Union in the early 1950s, General Refractories sold the houses it owned on Pennsylvania Avenue and Water and Shirley streets and closed its brickyard. Shantytown and the seven houses next to the plant were demolished, and the plant site became the property of the town. It was cleared and made into a park and athletic field. In the 1980s, part of the site was used to build senior citizen housing and a medical center.

Harbison-Walker also re-evaluated its holdings in the early 1950s and decided to divest its residential property as part of plant modernization, but rather than sell the houses to the resident employees, the company demolished

the entire Ganister Hill neighborhood. (Figs. 3.145-46) The company changed its source of ganister from an area on the north side of the Juniata River to the mountain directly above the plant. A rock processing facility was built between the quarry and the plant, and ganister was sent the rest of the way down to the plant on an overhead conveyor belt that passed between two houses on Ganister Hill. The houses had been so well integrated into the brickyard complex they could not be separated to establish a physical and symbolic distinction between home and workplace. They were no longer seen as making a contribution to brickyard operations but as interfering with access to the rest of brickyard property. Certainly transferring this area to private ownership was out of the question. Residents were allowed to purchase the houses for salvage for around \$200 and materials from many were used to build new houses, particularly in



Fig. 3.143 Vermont Farmhouse style house remodeled with additions and pink vinyl siding, Pine Street, Kistler, 1991. Photo by Kim Wallace.



Fig. 3.144 Vermont Farmhouse style house with original porch roof and siding, Poplar Street, Kistler, 1989. Photo by Jet Lowe.



Fig. 3.145 View north over Harbison-Walker brickyard and Ganister Hill houses, ca. 1945. Collection of H-W Retirees Committee.

an area called "the flats" northeast of the railroad along the Juniata River. Much of this neighborhood was destroyed in the 1977 flood. A federal housing project in Allenport on Mt. Union's southeast border also provided space for some of the displaced Ganister Hill residents.¹¹⁵

The Harbison-Walker plant operated through 1985, but at the end of November that year a company spokesman notified the United Steelworkers Union that it would be closed because the silica brick market had virtually collapsed. At the time, between twenty-five and forty-seven people were still employed, compared to 563 in 1925. North American Refractories' yard was finally closed in March 1990, and all but two of its beehive kilns have been razed.¹¹⁶ In 1991 a small company was salvaging bricks from the Harbison-Walker plant to sell for grog and mortar. Part of the crushing and grinding building was torn down and only the stacks of the beehive kilns remained in the open yard (Fig. 3.148).

¹¹⁵Nancy Shedd to author, April 9, 1992. MacCloskey, 84, 124. Ivan Phillips, interview by author, Mt. Union, Pa., June 11, 1991.

¹¹⁶Tom Gibb, "Former Keystone of Mt. Union Business Faces Final Shutdown," *Altoona Mirror* (November 26, 1985). "NA Refractories Closes March 1 in Mt. Union," *The Daily News* (March 5, 1990).

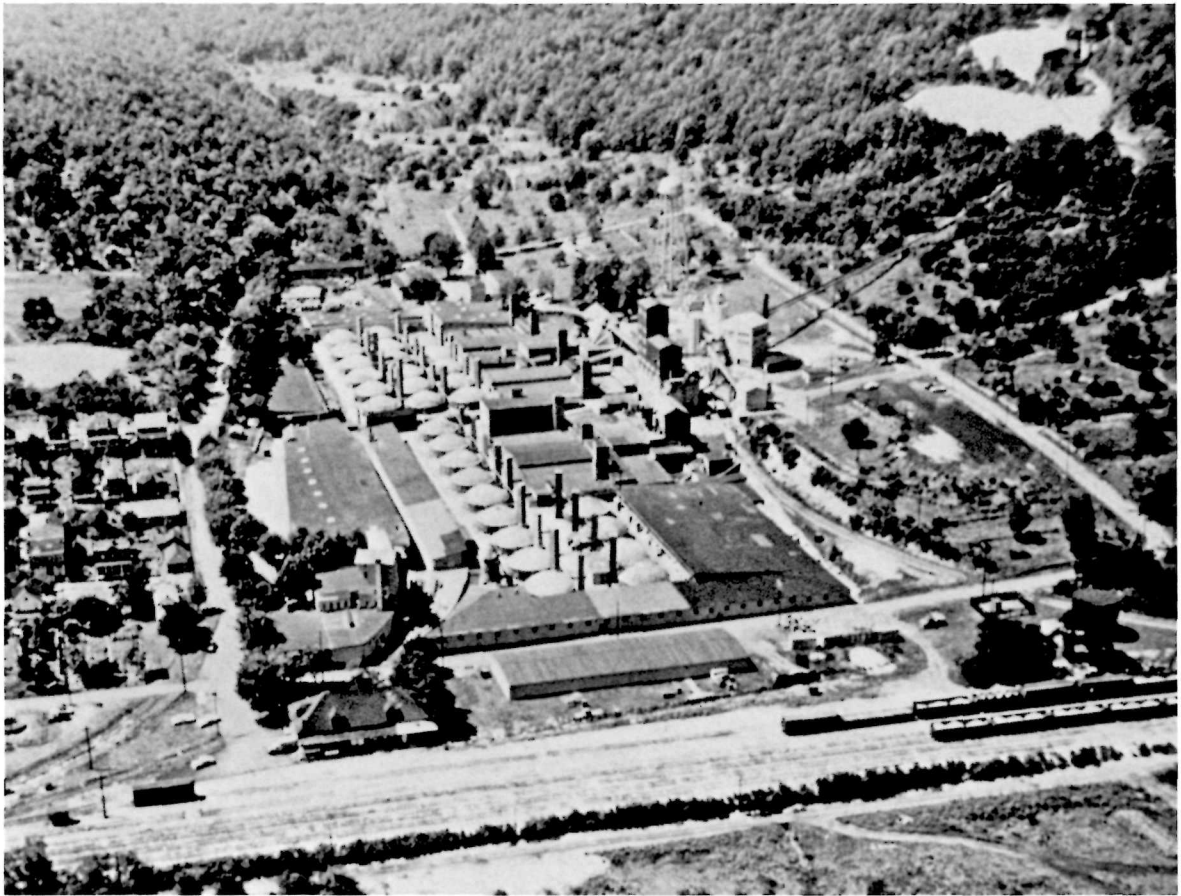


Fig. 3.146 View southwest over Harbison-Walker brickyard after demolition of Ganister Hill houses. Collection of H-W Retirees Committee.

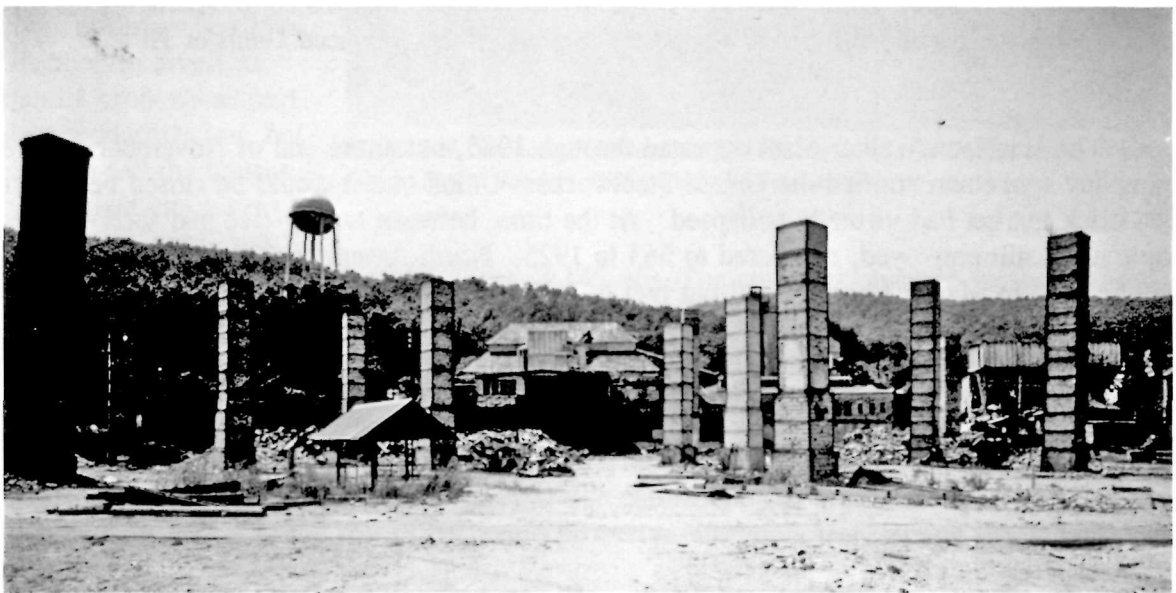


Fig. 3.147 Kiln stacks in the ruins of the Harbison-Walker brickyard, Mt. Union, 1991. Photo by David Ames.



Fig. 3.148 1936 mural by Paul Rohland representing brickyards and houses on Ganister Hill, U.S. Post Office, Mt. Union. Photo by David Ames.



Fig. 3.149 Mailbox base made of refractory bricks, U.S. Post Office, Mt. Union. Photo by Kim Wallace.

In 1936 Paul Rohland, artist employed by the Treasury Department's Section of Painting and Sculpture, painted a mural of Mt. Union in the new post office. (Fig. 3.148) He placed Harbison-Walker's smoking kilns and the rows of Ganister Hill houses at the painting's center. In 1990 citizens of the town collected bricks from each of the three brickyards and built a platform for a mailbox outside the post office. (Fig. 3.149) It was a memorial to the refractories industry and to hundreds of lost jobs and another public expression of the community's identity as a brickyard town.¹¹⁷

¹¹⁷"Mailbox Holder A Tribute To Bricktowners' Heritage," *Mt. Union Times* (September 14, 1990).



Fig. 3.150 Gen'l Refractories Company houses, France St., Sproul, at the base of Dunning's Mountain where ganister was mined. Photo by David Ames.

Sproul and Claysburg: Company Town to Shutdown

Like those in southern Huntingdon County, the ridges of southern Blair County were often covered with ganister. There was enough to support the growth of two brickyard towns just over a mile apart in Greenfield Township. Their brickyards were both built in the 1910s, and after 1922, both were owned by General Refractories Company. Despite their proximity, the plants were always maintained as separate facilities. The two towns associated with them developed differently and had very different histories.

In 1910 William A. Stanton, formerly employed by Harbison-Walker, persuaded seven other men to join him in purchasing the Sandy Ridge Fire Brick Company in Centre County and financing construction of a silica brick plant at Sarah Furnace, renamed Sproul, in southern Blair County. The next year the partnership bought two more existing plants and incorporated as the General Refractories Company.¹¹⁸ Its Blair County property was sited at the foot of ganister-covered Dunning's Mountain (Figs. 3.150-53) to compete with the Mount Union plants making silica bricks for the steel industry.

The local supply of ganister was so good that in 1913 a group of local investors built a second plant at Claysburg about a mile and a half north of the first. They formed the Standard Refractories Company led by Thomas N. Kurtz, a Johnstown native who had been in the refractories business since beginning work as a teenager in the office at A. J. Haws' Refractories.

¹¹⁸"The General Refractories Company," *Bulletin of the American Ceramic Society* (November 15, 1943), 363.

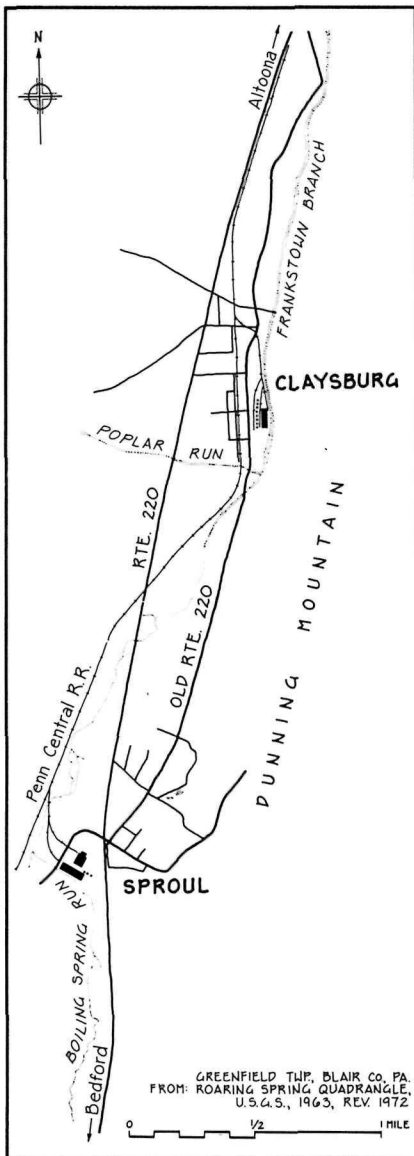


Fig. 3.151 Map of Sproul and Claysburg. Drawn by Isabel Yang.



Fig. 3.152 Building the dinkey track from the mountain to the Claysburg brickyard. Collection of Jean Markley.

Kurtz worked for two of the refractories companies in Mt. Union before moving to Hollidaysburg to be closer to his own works at Claysburg. He oversaw its growth to twenty kilns with a 140,000-brick capacity then sold it to General Refractories in 1922.¹¹⁹

Sproul

The first of the two plants in Greenfield Township, Blair County, was built at Sarah Furnace, a location named for an iron furnace built there in 1832 and operated intermittently until

¹¹⁹Kurtz helped found the Mt. Union Silica Brick Company in 1901 and was then hired by Mt. Union Refractories after it started production in 1912. After selling the Claysburg plant in 1922, he gained control of U. S. Refractories in Mt. Union. He oversaw its sale to North American Refractories in 1930 and remained with that company as vice president until his death in 1938. "Late T. N. Kurtz Claysburg Brick Industry Founder," *Altoona Mirror* (August 18, 1954). "Claysburg Brick Companies Merge," *Altoona Mirror* (August 5, 1922). "Big Brick Plant Deal Is Closed," *Altoona Mirror* (August 23, 1922). Kurtz's descendants still worked at Claysburg in 1979. *Claysburg 175th Anniversary*. (Claysburg, Pa., 1979), 152.



Fig. 3.153 Miners with a dinkey car on the mountain above Claysburg. Collection of Jean Markley.

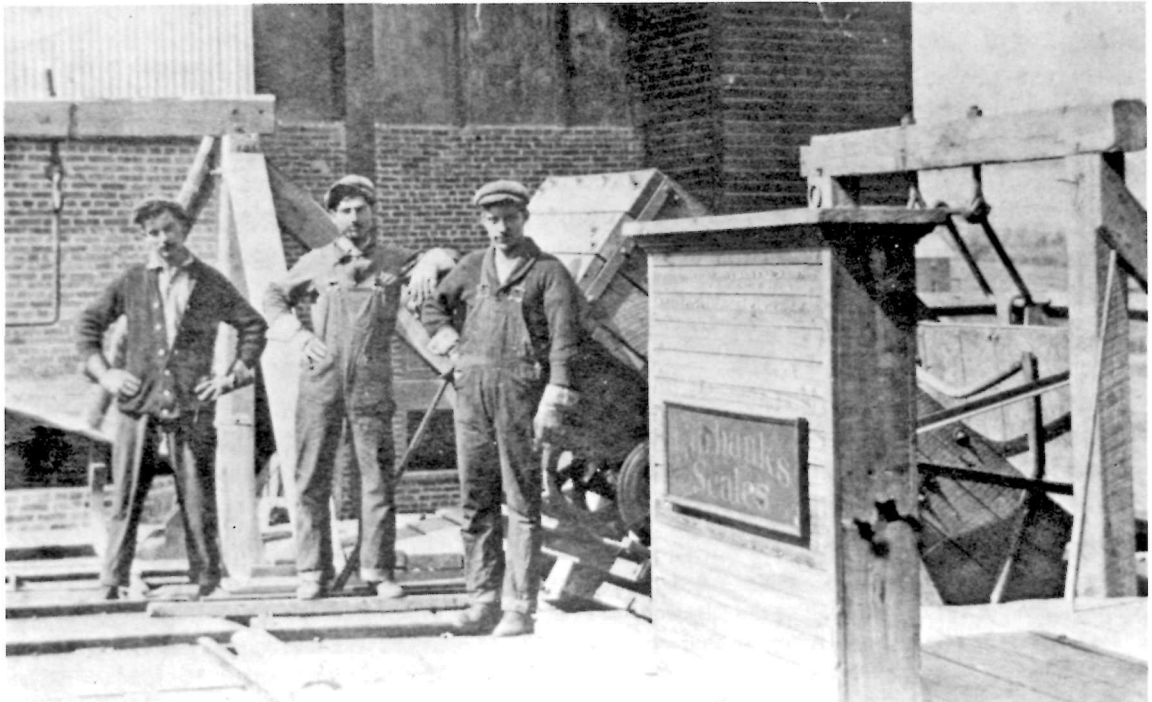


Fig. 3.154 Dumping a car of limestone at Claysburg brickyard. Collection of Jean Markley.

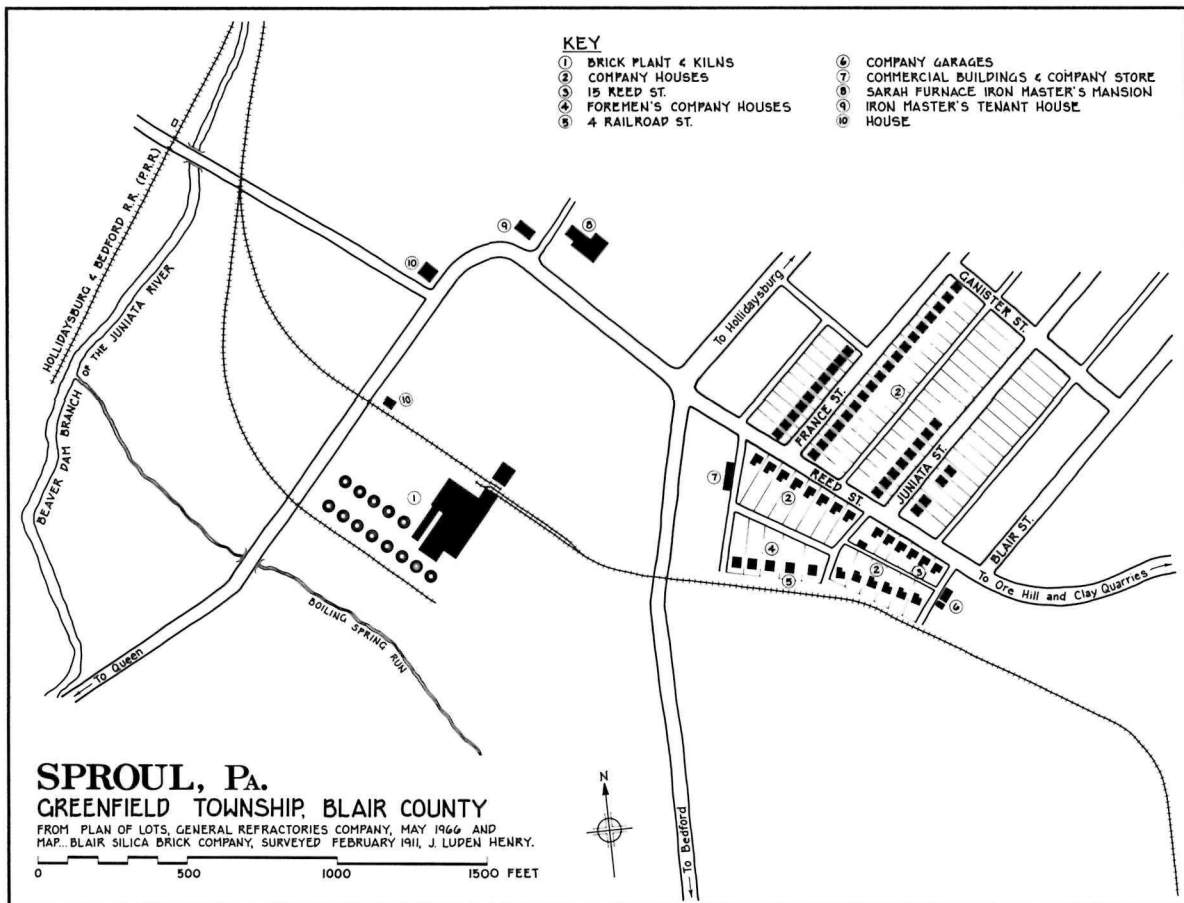


Fig. 3.155 Map of Sproul showing brickyard, town, and ironmaster's mansion. Drawn by Isabel Yang.



Fig. 3.156 Sarah Furnace ironmaster's mansion, Sproul. Photo by David Ames.

1882. Iron ore was mined across Dunning's Mountain near the village of Ore Hill. A lime kiln, the ironmaster's mansion and barn, and a large tenant house survive from this period. (Figs. 3.155-57) During its peak years the furnace was the center of a small community. In addition to a church, store, and post office, there were at least seven cabins built for furnace workers. The Sarah Furnace post office

was moved to Claysburg in the mid-nineteenth century, denominational churches replaced the Union church, and by the time the furnace closed for good, most of the population had dispersed. The community's revival eventually resulted from efforts that began in 1872 to make the area

accessible by railroad. Track grading construction started in 1891 and the line running north and south between Altoona and Bedford was finally opened in 1910.¹²⁰ It passed through Claysburg and next to the old Sarah Furnace property making both places feasible sites for brick making.

General Refractories built five kilns and five foreman's houses at Sarah Furnace in 1911. By 1917 there were twenty-two kilns and sixty-eight company houses and a population of about 275. (Figs. 3.155, 158) The post office was re-established and the town was renamed Sproul after company president William C. Sproul, who also served six terms as a Pennsylvania state senator and one term as governor (1919-23). A short row of independent commercial and residential buildings fronted the town along the state road between Bedford and Altoona. (Fig. 3.159) The plant was opposite, on the west side of the road. (Figs. 3.162, 165) To the east,



Fig. 3.157 Sarah Furnace tenant house, Sproul. Photo by Kim Wallace.



Fig. 3.158 Overview of France Street and school house, looking west towards the brickyard, Sproul. Collection of Jean Markley.

¹²⁰Africa, 121. Margaret Monahan, *The Long Journey: 1804-1954, 150 Years of Progress, Claysburg, Pa.* (sesquicentennial publication, Claysburg, 1954), n.p. George R. Walker, "Human Relationships and Brickmaking: A Sociological Analysis of a One-Industry Community" (Ph.D. diss., University of Pittsburgh, 1953), 46-48.



Fig. 3.159 Commercial buildings along old Rte. 220, Sprout. Wees Furniture building was once the company store. Photo by David Ames.

behind the tavern and stores, company houses were lined along France, Reed, Railroad, and Ganister streets. Reed Street led up Dunning's Mountain to Ore Hill past ganister floes and quarries. (Fig. 3.160) A dinkey track between the quarries and the plant passed directly in front of the houses along Railroad Street. (Fig. 3.169) The first five buildings on this street were the original

foreman's houses. (Figs. 3.167-68) They were larger and more stylistically refined than the others. Each had four bedrooms and a bathroom on the second floor; a kitchen, dining room, and living room on the first, and a full basement. The floor plan, clipped gable roof, and full-width front porch with Doric posts gave these houses a colonial revival form that appeared in small towns across the country at the beginning of the century. The other houses, however, are smaller and have a more vernacular form common in rural Pennsylvania. (Fig. 3.166) They originally had six rooms--three second-floor bedrooms and a first-floor, hall-parlor-and-kitchen-all plan. The houses were built by contractor George Gibbonney who owned a planing mill in Everett about twenty-five miles to the southeast and who was responsible for other company



Fig. 3.160 General Refractories company houses, view east along Reed Street, Sprout. Photo by Kim Wallace.

houses in the region.¹²¹ The houses had a privy in each backyard (Figs. 3.158, 170), cold running water from the company water tower in the kitchens, and one light in each room run by electricity from plant generators.¹²²

The superintendent replaced the ironmaster as resident of the brick mansion and as head of the paternalistic community. Two other management-level employees occupied the tenants' house. The company replaced the log church with a simple frame structure. (Fig. 3.171) The first superintendent set a precedent of regular church attendance and leadership for his successors.¹²³



Fig. 3.161 General Refractories Company houses along France Street near intersection with Reed Street, Sproul. Photo by David Ames.

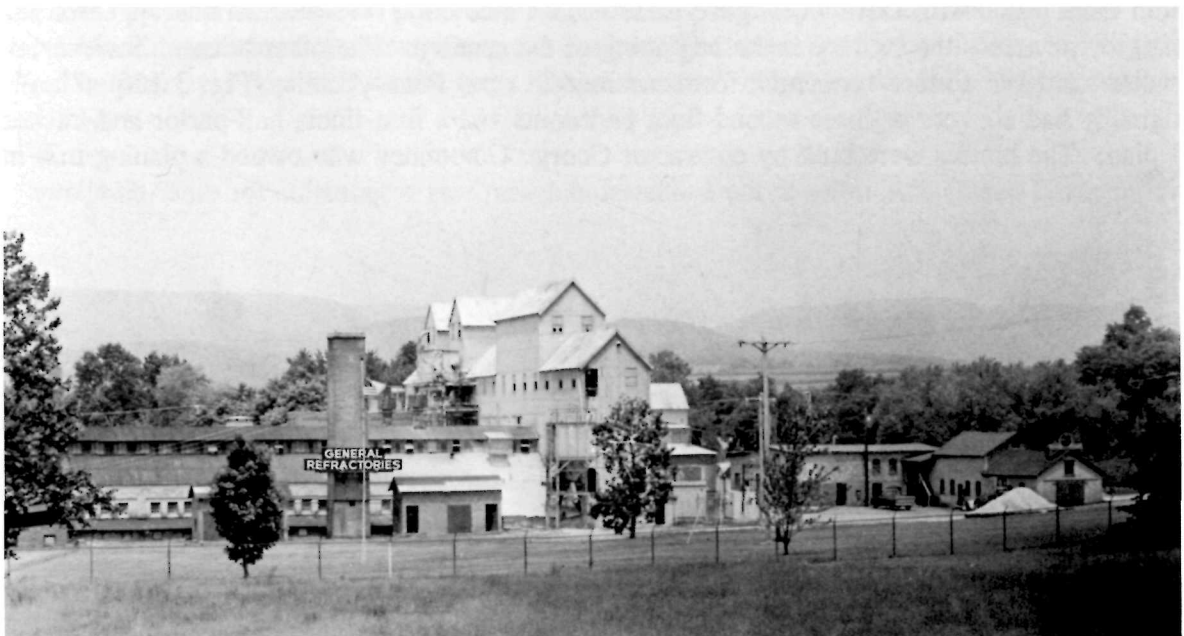


Fig. 3.162 General Refractories Company plant from old Rte. 220, Sproul. Photo by David Ames.

¹²¹Lola Bennett, The Company Towns of the Rockhill Iron and Coal Company, Robertsdale and Woodvale, Pennsylvania (Washington, D.C.: Historic American Buildings Survey/Historic American Engineering Record, National Park Service, 1990), 85.

¹²²Paul MacDonald, interview by Margaret Mulrooney, Sproul, Pa., 1989. Walker, 62. "Sproul Takeover Completed," Altoona Mirror (October 13, 1982).

¹²³Walker, 161-62.



Fig. 3.163 Rear ells of company houses along France Street, Sproul. Photo by David Ames.

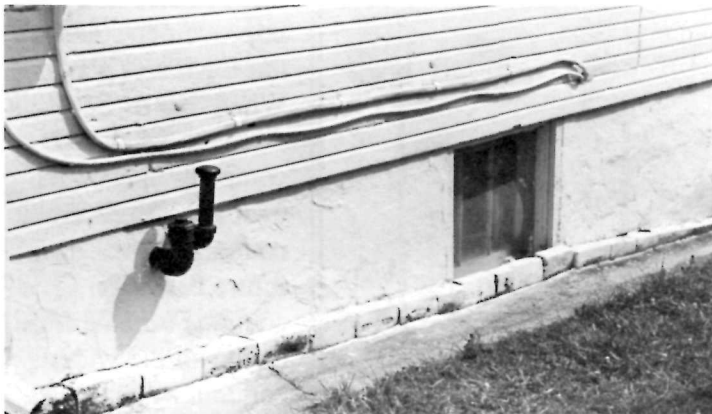


Fig. 3.164 "Standard" refractory bricks around foundation at 15 Reed Street, Sproul. Photo by Kim Wallace.

In 1924 the superintendent detailed workers to build a baseball field. A company team played in the county league until there was a shortage of players during World War II. A company maintenance crew was responsible for Sproul's streets and streetlights and for the church and houses. During the summer a third of the houses were painted a uniform color so that each house was painted

every three years and the town had houses of three different colors. The superintendent made regular visits into town to inspect company property and give employees' wives an opportunity to make requests.¹²⁴

First-hand attention was given to residents as well as to the physical condition of the town. When an employee was injured or was unable to perform his usual job for any reason managers found some work he



Fig. 3.165 General Refractories Sproul plant from the northeast. Photo by David Ames.

¹²⁴Walker, 161-62, 164, 248.

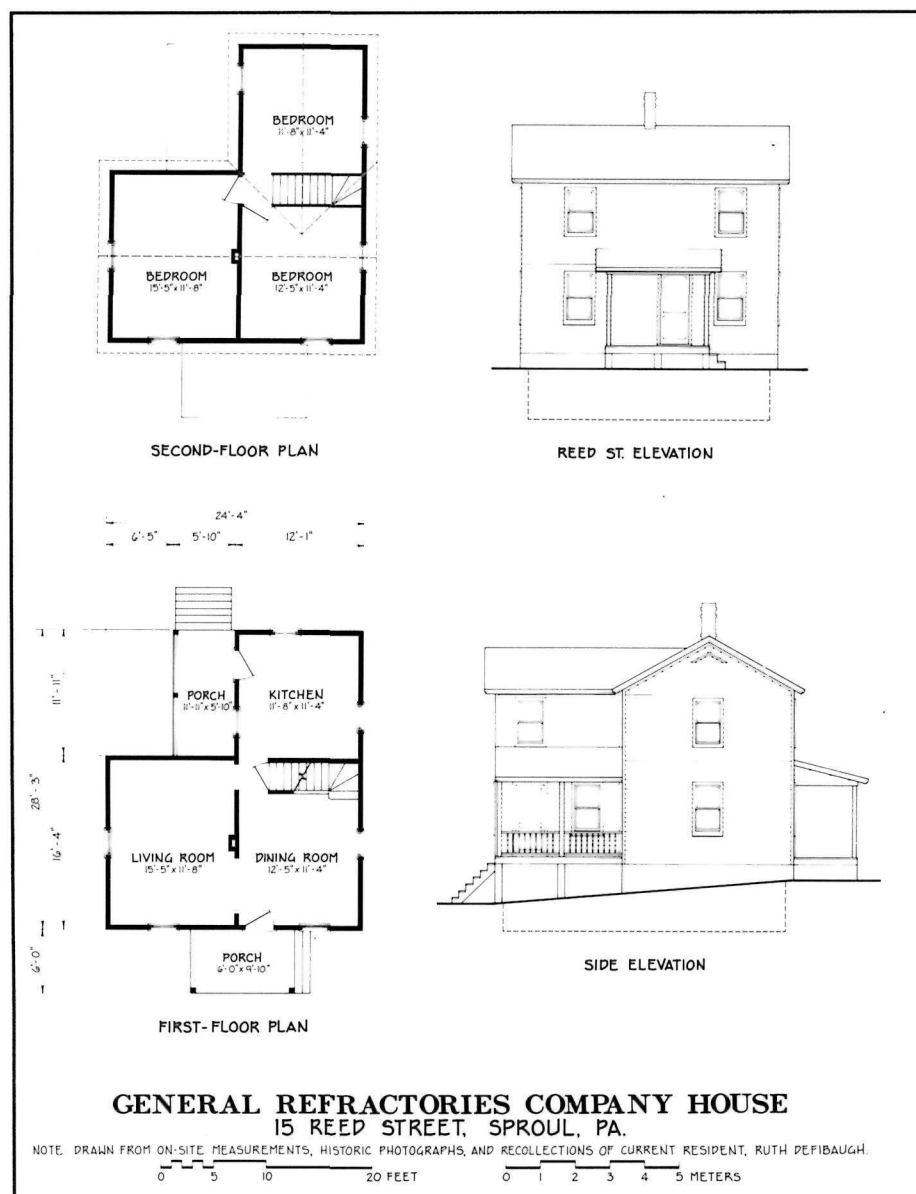


Fig. 3.166 Elevations and floor plans, 14 Reed Street, Sproul. Drawn by Isabel Yang.

limestone kiln on the property was re-opened and became another means of employment as well as a source of fertilizer for employees' gardens. After six years of intermittent orders the plant returned to full capacity production in 1936.¹²⁵

The company's efforts to help employees through the period of unemployment suited and grew out of local values and circumstances. Sproul was self-contained and virtually entirely

could do to continue his income or reduced or waived the rent for his house. Brick orders fell off drastically during the first months of the Depression and the plant was closed for a time in 1930. The company reduced housing rents and set up its own make-work programs of maintenance and improvements around the town and plant. When one of Sproul's three stores closed, the company opened its own and issued credit coupons in lieu of future earnings. The coupons became legal tender in the wider community, accepted for bus fare, school lunches, and tickets to the Claysburg theater. A farmer who rented company-owned land worked off his rent by cultivating additional land for employees to use as subsistence garden plots. A

¹²⁵Walker, 54-55, 57. "Business Increases," *Altoona Mirror* (June 28, 1933). "Many Workers To Be Called Back," *Altoona Mirror* (June 28, 1933). "General Refractories Has Better Earnings," *Altoona Mirror* (July 20, 1934).

company-owned. Its residents were all natives of the surrounding rural area and tended to share an individualist and isolationist outlook. They were uncomfortable with public assistance, and local management's concern that they continue working earned the company gratitude that lasted through World War II. Company loyalty and anti-union sentiments that were typical of the area were evident in 1939 when union organizers tried to hold a meeting in McKee a few miles north of Claysburg. Local residents prevented the organizers from speaking and drove them away under a barrage of fruit and vegetables.¹²⁶

Organizing attempts began at the Sproul and Claysburg plants about 1936, but only about a dozen workers were reported to show any interest, and organizers were subjected to at least three other adamant public rejections. By 1947, however, sentiments were reversed and General Refractories employees invited union representatives to Sproul, and a local of the United Mine Workers was instituted in April. The anti-union stance eroded during the 1940s in part because returning servicemen formed the majority in the post-war work force and their experiences in the outside world made them more amenable to the concept of unionization. More important in changing attitudes were changes in company policy that

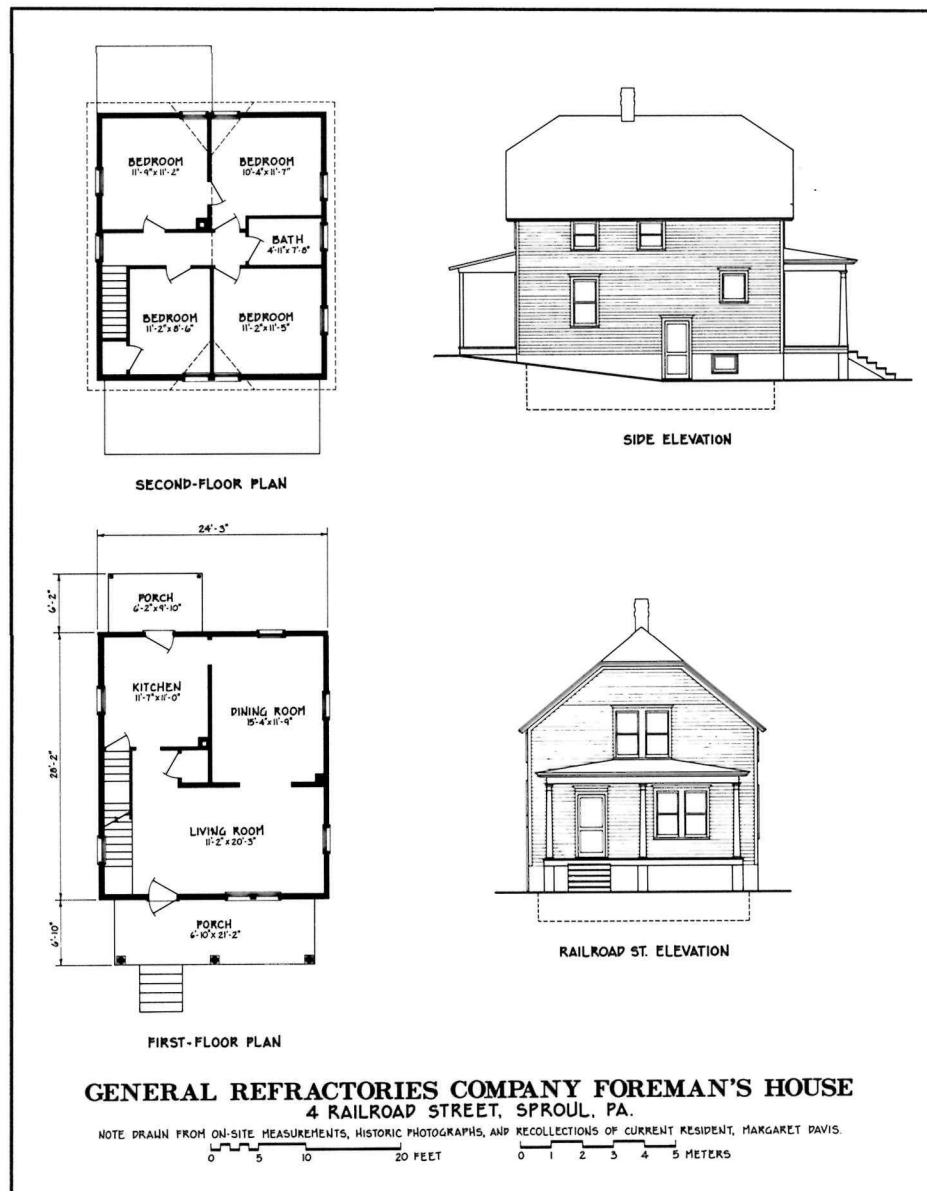


Fig. 3.167 Elevations and floor plans, 4 Railroad Street, Sproul. Drawn by Isabel Yang.

¹²⁶Walker, 57-58. "Union Meeting Is Ended As Crowds Gather On Scene," *Altoona Mirror* (October 11, 1939).



Fig. 3.168 View east up Railroad Street past General Refractories company foremen's houses, Sproul, 1987. Photo by Nancy Shedd.

angered and alienated most workers and prompted a number of wildcat strikes.¹²⁷

Modernization of company organization and practices was accelerated during the early forties and at the local plant level resulted in an ending of face-to-face paternalism. Rather than promoting foremen and superintendents from within the plant ranks, younger college-



Fig. 3.169 Ca. 1912 view west down Railroad Street towards five managers' houses, Sproul.

¹²⁷Walker, 106-08.

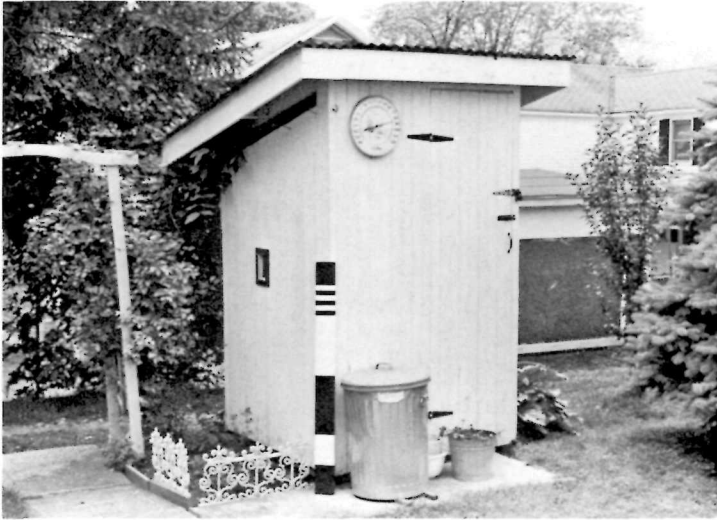


Fig. 3.170 Outhouse now used as a potting shed at 14 Reed Street, Sproul. Photo by Kim Wallace.

educated men were assigned the position for short-term stints as part of a company-wide management training program. Veteran employees who might have expected to move into these jobs themselves resented being supervised by men inexperienced in the process and work of brick making and in working with people. These foremen did not live in Sproul or participate in community social life. Unlike his predecessors, the superintendent in 1953 had never been in the residential section of Sproul and did not know all of his employees by name. Even though a company maintenance crew still painted and repaired company

houses, they were no longer given priority over plant maintenance and other, once routine general maintenance work in the town was done only sporadically. Rents were raised and collected regularly without consideration of tenants' health or level of employment. General Refractories sold all of the houses to individuals in the 1960s, and in 1982 it ceded the town's water tower and lines to the newly formed Sproul Water Association, formally completing its de facto disavowal of the paternalistic role.¹²⁸

The residents of Sproul have always viewed their town as a distinct entity even though it



Fig. 3.171 Union Church and cemetery, Sproul. Photo by Kim Wallace.

¹²⁸Walker, 75, 248-51. Blair County deed records. "Sproul Takeover Completed," *Altoona Mirror* (October 13, 1982). "Sproul to Advertise for Waterline Replacement," *Altoona Mirror* (February 16, 1987).

has remained an unincorporated village at the southern edge of the county. They have long resented the tendency of their neighbors and local governments to overlook it or, even worse, to view it as an appendage of Claysburg. Although it is certainly not that, it is true that Claysburg was the service center for Sproul as for other smaller

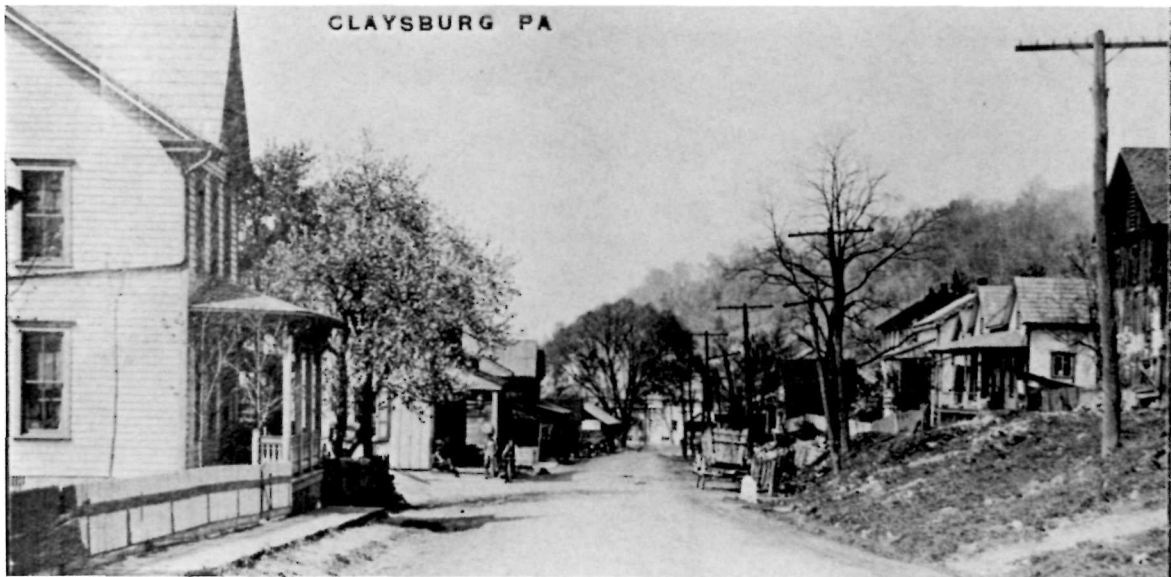


Fig. 3.172 Claysburg school built with the assistance of the Works Progress Administration. Photo by David Ames.

communities around the township. After 1934 Greenfield Township schools were consolidated in Claysburg and, to residents' dismay, Sproul lost its grade school, an institution that contributed to their local identity. (Fig. 3.172) Students walked the mile-and-a-half to Claysburg, and tended to preserve their subregional identity in social groups and participation in sports activities. They should not have felt out of place among Claysburg students whose fathers were also brickyard workers and in a school whose newspaper was called the Brickbat.¹²⁹

Claysburg

Claysburg's twenty-one original lots along Main or Bedford Street just east of Beaver Dam Creek were plotted in 1839. The little village was anchored by a saw and grist mill and a



3.173 Looking north along Claysburg's main street south of the brickyard. Collection of Jean Markley.

¹²⁹Walker, 167-69. Monahan, 54, 104-05.

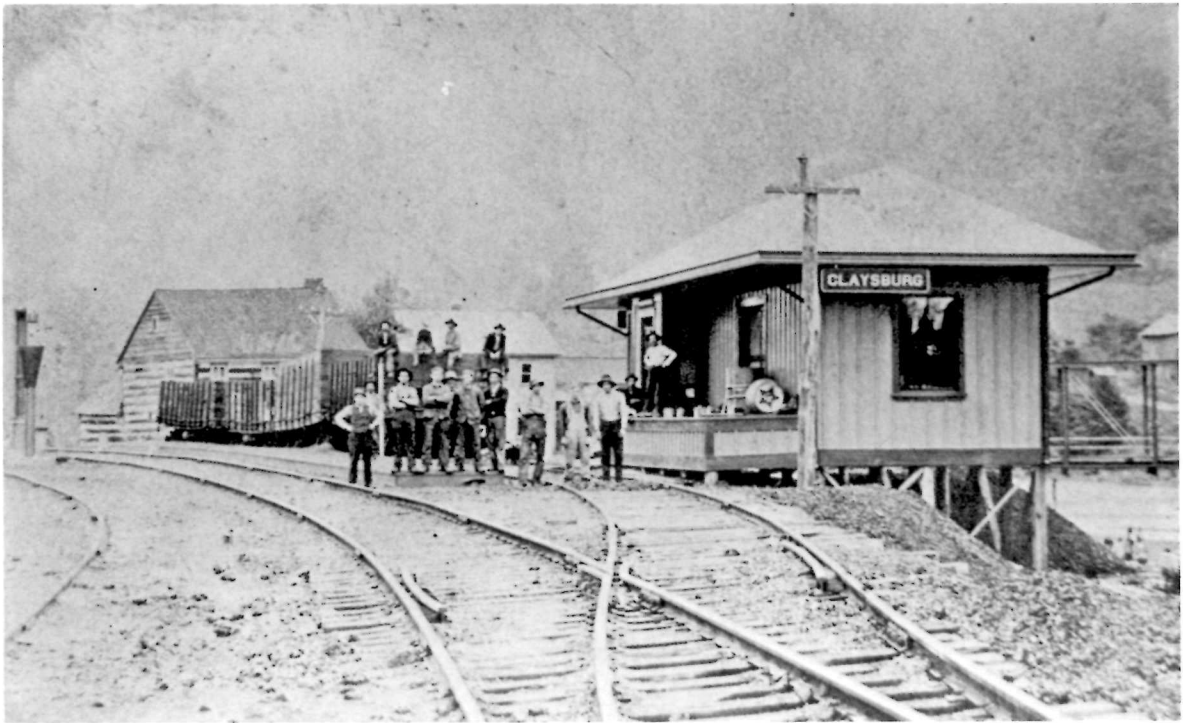


Fig. 3.174 *Claysburg station.* Collection of Jean Markley.

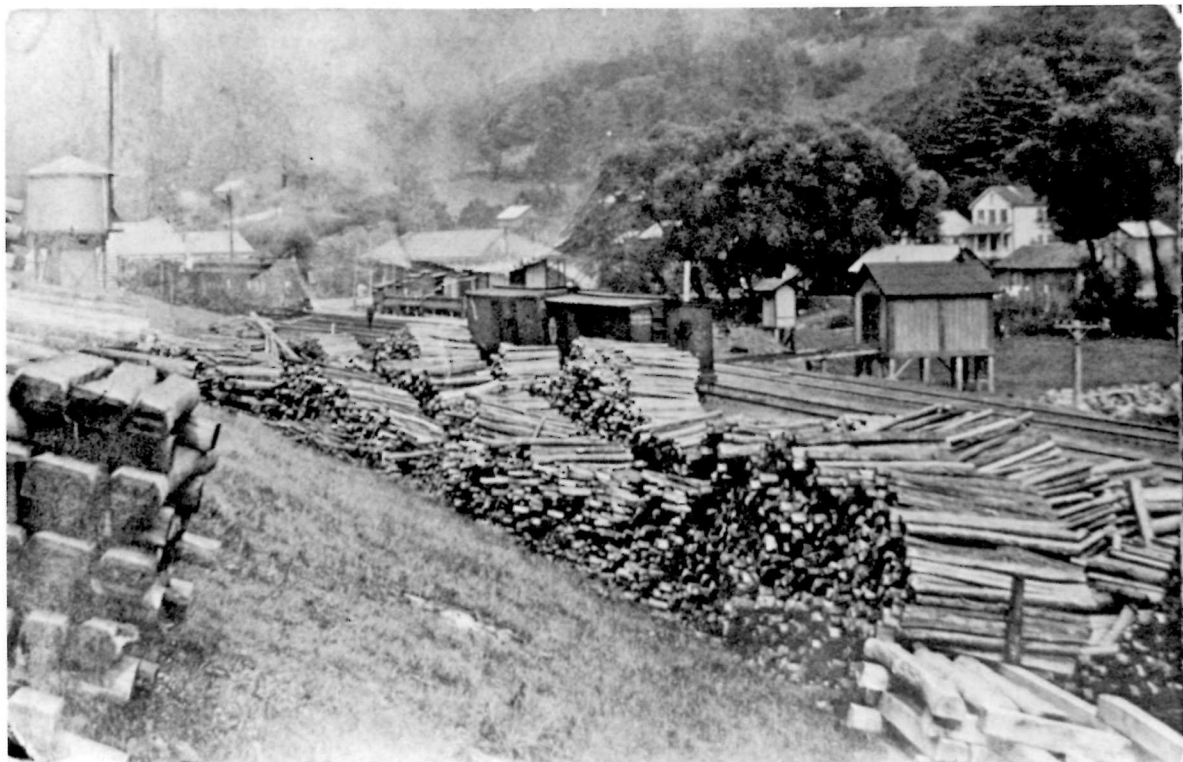


Fig. 3.175 *Railroad ties and shipbuilding pins were Claysburg's chief export before construction of the brickyard.* Collection of Jean Markley.

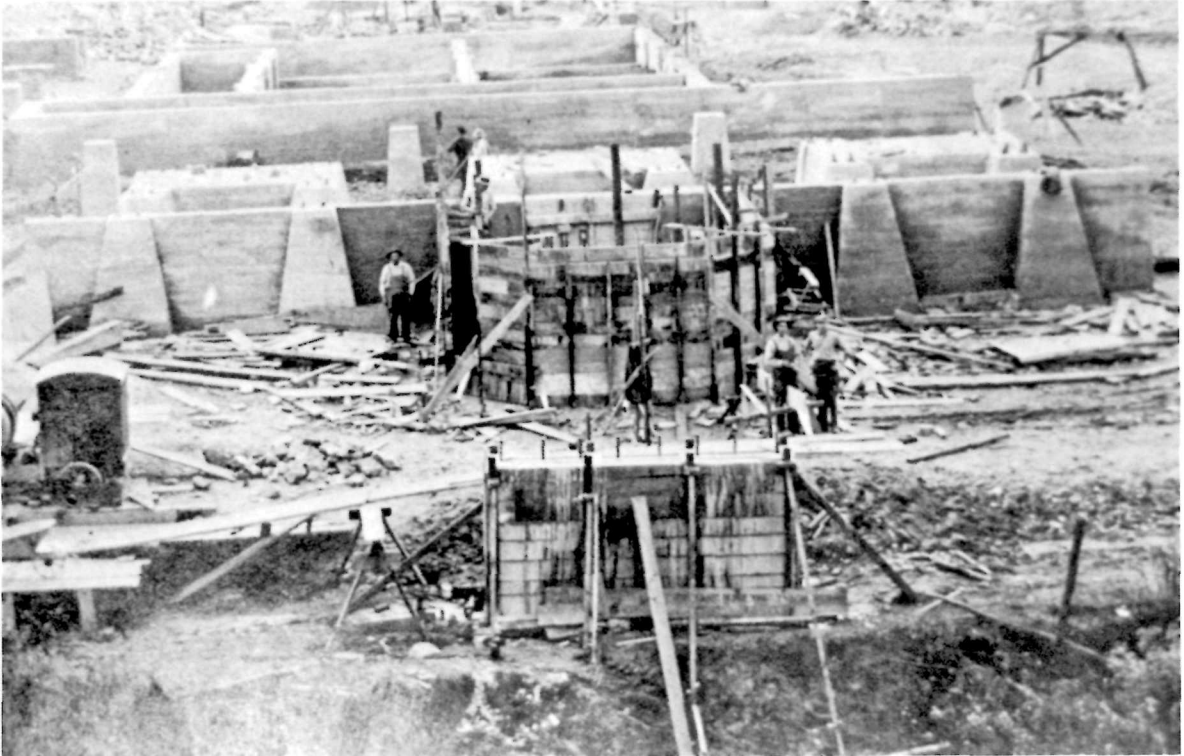


Fig. 3.176 Construction of the Claysburg brickyard. Collection of Jean Markley.



Fig. 3.177 Construction of the Claysburg brickyard. Jean Markley.

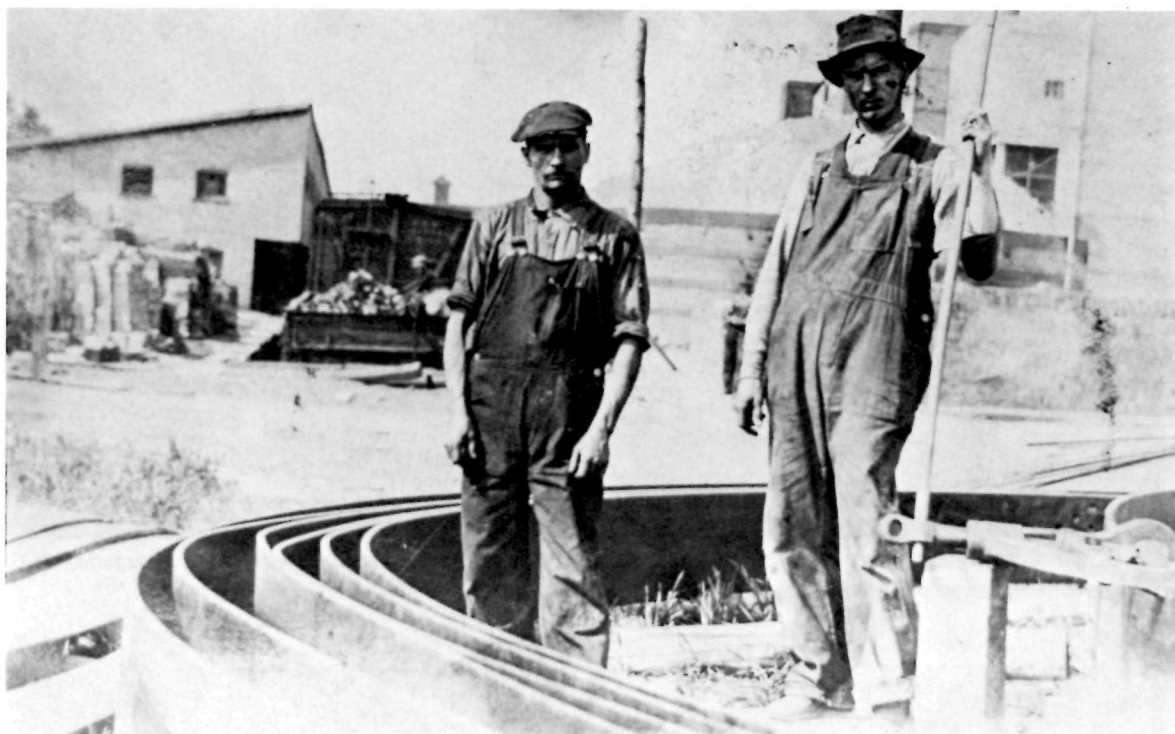


Fig. 3.178 Construction workers standing in iron kiln bands at Claysburg brickyard. Collection of Jean Markley.

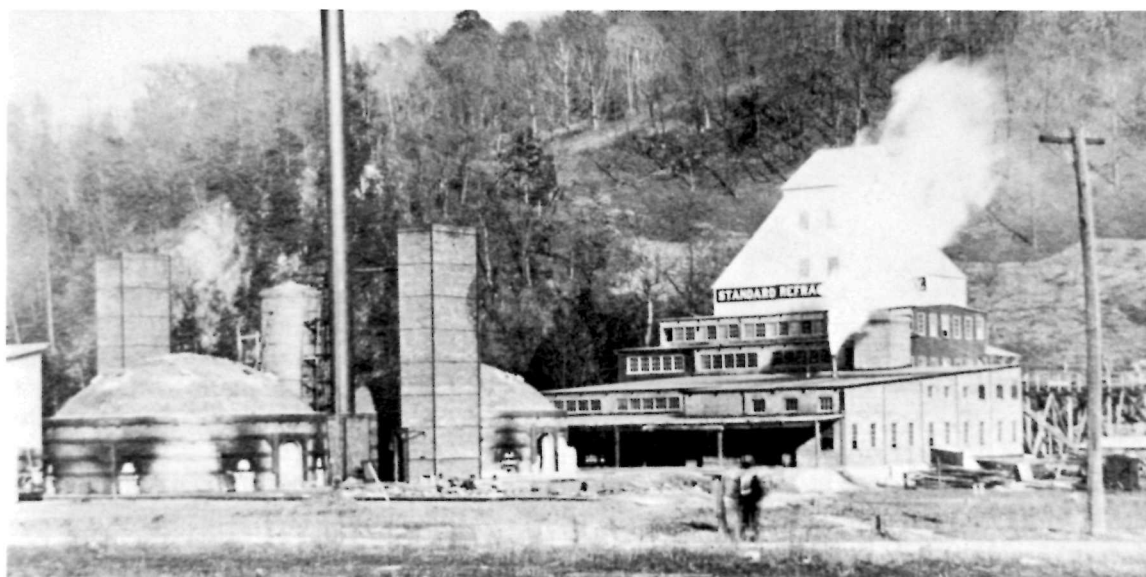


Fig. 3.179 Claysburg brickyard. Collection of Jean Markley.

stone inn where namesake Henry Clay was reputed to have been a guest. By 1883 it claimed two hundred inhabitants who supported three church congregations, an Odd Fellows Hall, a pharmacist, undertaker, and several merchants. It was about this time that Jesse L. Hartman,

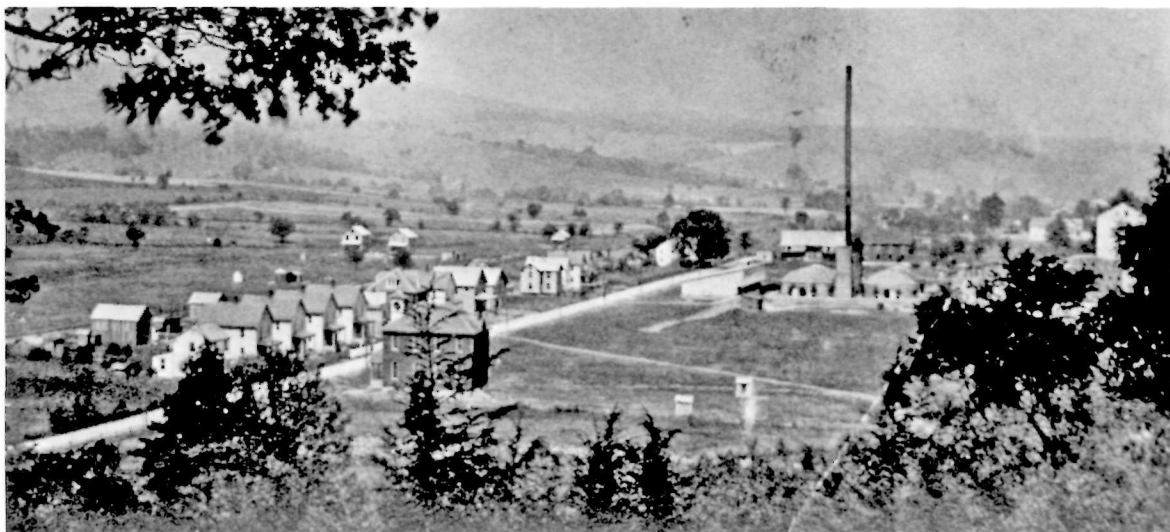


Fig. 3.180 Looking northwest over Claysburg's brickyard extension and initial growth after construction of the brickyard. Collection of Jean Markley.



Fig. 3.181 Overview of Claysburg a few years later showing additional houses, church and Burkett's planing mill at left. Collection of Jean Markley.

manager of an iron furnace at McKee five miles north of Claysburg, began quarrying ganister from Dunning's Mountain.¹³⁰ Three decades later when Thomas Kurtz and his investors decided to locate a refractories plant at the source, private and company development more than doubled Claysburg's geographic area, extending its border on either side of the state road north of the original village. (Fig. 3.182)

¹³⁰Africa, 117. "Hon. J. L. Hartman Pneumonia Victim," Altoona Mirror (February 17, 1950). "Ganister Bricks Steelmen's Need," Altoona Mirror (June 13, 1934).

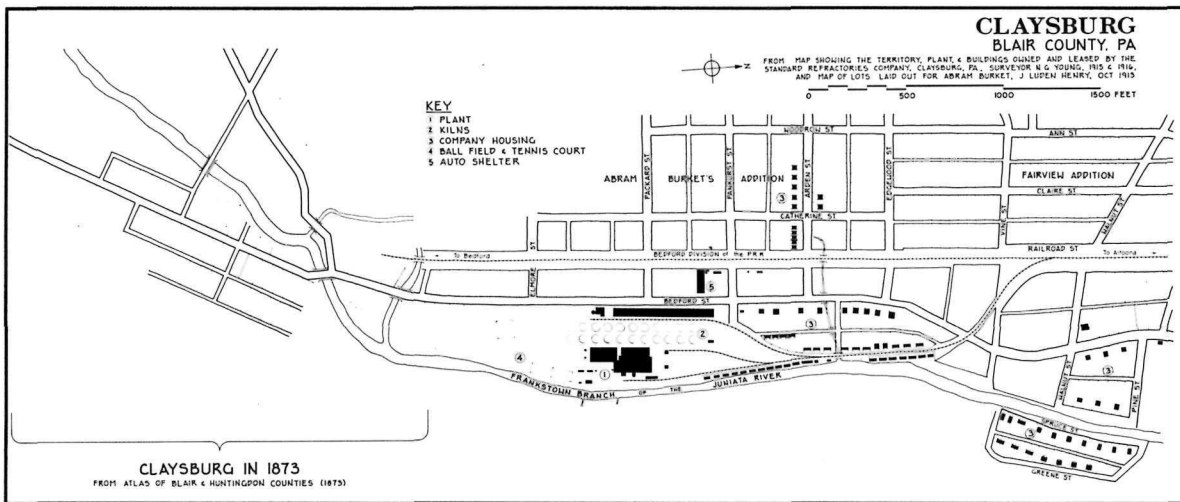


Fig. 3.182 Map of Claysburg showing growth of the town after construction of the brickyard. Drawn by Isabel Yang.

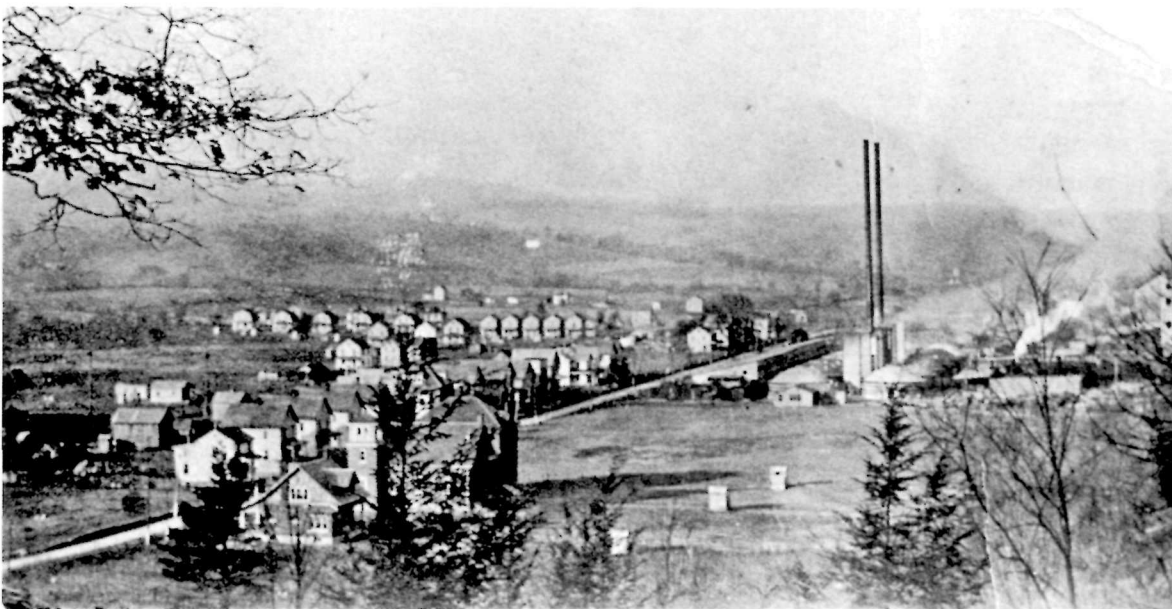


Fig. 3.183 Overview of Claysburg looking northwest showing brickyard and new houses. Collection of Jean Markley.

Local merchants and landholders profited from the expansion and influx of new residents. Several local families recorded plots of land as additions to the town's territory and subdivided them into house lots. "Barnhart's Extension to Claysburg," proffered by the heirs of Adam Barnhart, was recorded in 1917. Descendents of Jacob Fries sold land to Standard Refractories which was included in the "Second Extension to Claysburg" recorded in the Blair County Courthouse in 1920. Martin A. Lingenfelter owned a plot on the north side of the township road between Ann and Railroad streets which became the "Fairview Addition" to Claysburg, surveyed

in October 1913.¹³¹

Another Claysburg native, Abram, or Abraham, Burkett was one of the most prominent local businessmen who became interested in residential development around the plant. He was already prospering in 1912 and was in a position to take advantage of the imminent boom. Burkett had returned to Claysburg from the Civil War in 1865 and was listed in township tax records that year as a laborer and owner of one cow. Ten years later he was a homeowner and merchant. In 1885 a second house, a horse, buggy, and twenty acres of timber land were added to his holdings. By the time Standard Refractories began building brick kilns, he owned eleven houses, lime kilns, and more than a hundred acres of timber and farm land. He owned property on the west side of the plant and turned his

attention to developing it with rental and speculation housing. A series of photographs of the area show the Burkett family's planing mill and the gradual infill of houses. (Figs. 3.180-81, 183) Between 1917 and 1920 when war demand brought a boom to the refractories industry, nineteen houses were added to Burkett's tax roll bringing his total to twenty-nine. They included



Fig. 3.184 Private rental houses along the Hollidaysburg and Bedford Branch Railroad. Photo by David Ames.



Fig. 3.185 Back view of private rental houses along Catherine Street, Claysburg. Photo by David Ames.

¹³¹Rev. Isaac Krider, Barnhart's Extension to Claysburg. Recorded August 14, 1917, Blair County Courthouse. J. Luden Henry, Plan of lots laid out for the Standard Refractories Company on the tract of land purchased from the Heirs of Jacob Fries, deceased. October 1916. General Refractories Company file. N. G. Young, Map of Second Extension to Claysburg, Greenfield Township, Blair County, Penna. Standard Refractories Company, July 1917. Recorded May 28, 1920, Blair County Courthouse. General Refractories Company file. J. Luden Henry, Map of Fairview Addition to Claysburg, Greenfield Twp., Blair Co., Pa. Property of M. A. Lingenfelter. October 30-31, 1913. Recorded November 5, 1913, Blair County Courthouse. General Refractories Company file.



Fig. 3.186 Managers' houses, Bedford St., Claysburg. "Shanty row" paralleled a rail spur behind these houses. Photo by David Ames.

one-and-a-half-story bungalows fronting on the Hollidaysburg and Bedford Branch Railroad (Fig. 3.184) and two-story, gambrel-roofed houses on Catherine and Vine streets. (Fig. 3.185) Abram Burkett's extension to Claysburg, from Beaver Dam Run to the township road, was mapped in 1917.¹³²



Fig. 3.187 Claysburg brickyard from north. "Shanty row" visible at left. Collection of Jean Markley.

¹³²Greenfield Township tax assessment records. Jean Markley, interview by author, Claysburg, Pa., June 15, 1991. J. Luden Henry, A Connected Draft showing the property and right of way belonging to the Standard Refractories Company at Claysburg, in Greenfield township, Blair County, Pennsylvania, and the piece to be acquired from Abram Burket. . . . November 15, 1915. General Refractories Company file. J. Luden Henry, Map of Lots Adjoining the Town of Claysburg in Greenfield Township, Blair Co., Pa. for Abram Burket or Burket's Extension to Claysburg, October 13, 1913. Recorded July 14, 1948, Blair County Courthouse. General Refractories Company file.

Even though local property holders like Burkett built houses for workers, Standard Refractories built its own housing stock. Its "Second Extension to Claysburg" was officially recorded in June 1920. Seventeen company houses first appear in tax records in 1917. They included eight of one story assessed at \$175 each, two of two stories for \$550, and seven of one-and-a-half and two stories for \$400. The lack of uniformity is contrary to

the pattern usually expected of the company town but was typical of Standard Refractories', and later General Refractories', building program in Claysburg. Contracting with the local building team of Essington and Burdine Claar, who founded their business in 1912, the company brought its housing stock to a total of 105 buildings by 1926. The tax assessor put them in fourteen

valuation groups ranging from one two-story brick house and two one-and-a-half-story houses to the largest groups of eighteen two-story houses and twenty-four one-story bungalows.¹³³ (Fig. 3.188)

These houses were built to accommodate workers recruited from among East European



Fig. 3.188 General Refractories Company houses along the Frankstown branch of the Juniata River, Claysburg. Photo by David Ames.

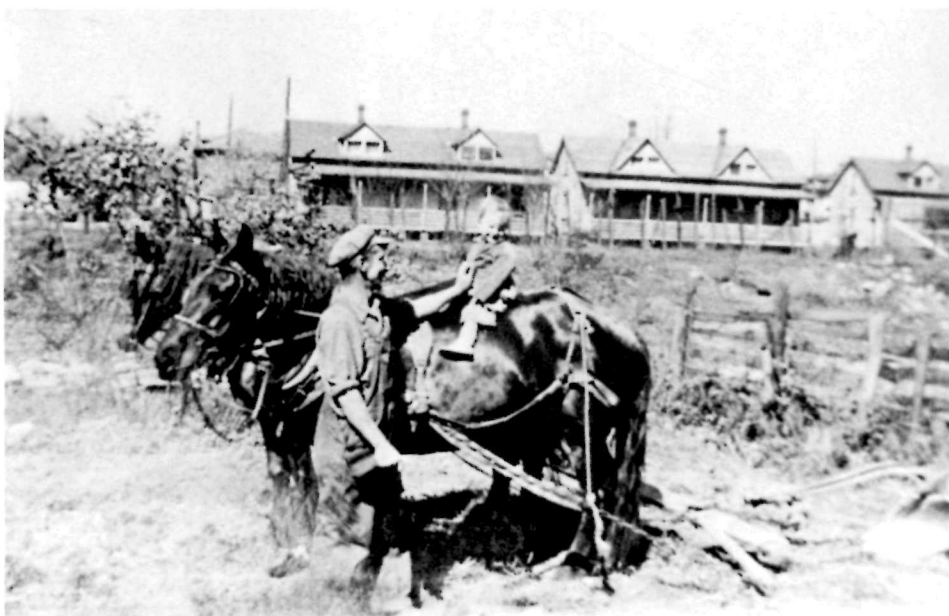


Fig. 3.189 Irvin and Richard Dively with horse team on the river side of "shanty row," Claysburg, May 16, 1941. Collection of Jean Markley.

¹³³The Altoona Mirror reported that Standard Refractories' tenant houses numbered 140 at the time of the sale to General Refractories in 1922, "Big Brick Plant Deal Is Closed," (August 23, 1922). Greenfield township tax assessment records. E. H. & B. Claar advertisement in Monahan, n.p. Claysburg 175th Anniversary, 32.



Fig. 3.190 *Gazzara's store, Bedford Street, Claysburg.* Photo by David Ames.

immigrants and from the African-American community around Little Rock, Arkansas.¹³⁴

The Greenfield Township tax assessment records first included a list of twelve "foreigners" in 1912. By 1919, 101 men were listed separately as "Aliens employed by Standard Refractories Co." and forty-five as "colored" employees. The 1925 tax assessment census showed the proportion reversed

with 112 "colored" residents with forty-two spouses and forty-one "aliens" with twenty spouses. The assessor noted of both groups that "all reside in Claysburg."

For the next few decades Claysburg was distinctive in the valley as a diversely populated, booming little town whose Main Street was crowded every Saturday with moviegoers and shoppers. Locally known neighborhoods included "shanty row," one-story houses lined along the Juniata river branch and the railroad spur to the brickyard (Figs. 3.186-87), and "Little Africa,"

near the brickyard dump between Route 220 and the Lutheran Church. Italian and Austrian families like the Gazzaras and Berrichs joined those with a longer local history like the Mauks and Zeths of German heritage. Joseph and Mary Gazzara traveled from Italy to Altoona in 1912, then moved to Claysburg when construction of the brickyard began. They built a house in



Fig. 3.191 *Mt. Hope Missionary Baptist Church, Claysburg, built by African-American residents.* Photo by Kim Wallace.

¹³⁴Gray Fitzsimons, ed., Blair County and Cambria County, Pennsylvania: An Inventory of Historic Engineering and Industrial Sites (Washington, D.C.: HABS/HAER, National Park Service, 1990), 96.

Fairview Addition and opened a grocery store on Bedford Street (Fig. 3.190). In 1926 they built a multi-purpose building used as a dance hall, pool room, and barber shop. Anthony Berrich immigrated in 1906 from Austria to join his brother working in the stone quarry at Carlim in eastern Blair County. He married Catherine Verbonitz and moved to Claysburg in 1915 with a number of Carlim residents who thought the brickyard offered better opportunities.¹³⁵



Fig. 3.192 General Refractories Company clubhouse, Fries house, Bedford Street, Claysburg. Photo by David Ames.

In addition to supporting commercial growth, prosperity and the population boom gave a real boost to local religious institutions. By 1914 there were enough new residents of the Catholic faith to support a mission church. St. Anne's Catholic Church was dedicated in October. African-Americans in Claysburg organized the Mt. Hope Missionary Baptist congregation in 1914. Their church was completed in 1921 under the supervision of Rev. W. H. Roosezell.¹³⁶ (Fig. 3.191) Methodists of the area had been holding services in the Odd Fellows Hall in Claysburg since 1879 when it moved from the Union Church at Sarah Furnace. In 1915 they were able to build a Queen Anne-style brick church on the south side of the brickyard.

While Standard Refractories was entirely responsible for Claysburg's rapid growth during the 1910s and 1920s, the company relied on the existing infrastructure and private enterprise to expand to serve the increased population. Still, with more than one hundred company houses, the company was also committed to providing community services. Beyond the basic necessity of maintaining the houses, it supplied electricity to much of the town from a steam plant run with waste heat from the kilns.¹³⁷ It provided space for the Claysburg post office in a company office building and sponsored a kindergarten and playground for local children. A nurse was also stationed in the company office building; each employee was covered by an accident and life insurance policy. A baseball diamond and tennis courts were built on company property and a company supervisor was put in charge of "social work and recreation." A clubhouse for

¹³⁵Markley interview, June 15, 1991. *Claysburg 175th Anniversary*, 126-27, 176. Africa, 117-18.

¹³⁶*Claysburg 175th Anniversary*, 109, 116. Cornerstone, Mt. Hope Missionary Baptist Church, Claysburg, Pa. While Mt. Union, the other brickyard town where African-American workers were recruited, still has an African-American population with active churches, most of Claysburg's African-American residents moved away, and the church was sold to another Baptist congregation. Jean Markley, interview by author, Claysburg, Pa., June 28, 1991.

¹³⁷Moore and Taylor, 51.



Fig. 3.193 *Greenfield Lodge clubhouse, north of Claysburg.* Photo by Kim Wallace.

employees and business visitors was maintained in the Jacob and Eliza Fries house on Main Street. (Fig. 3.192) It was succeeded by the Greenfield Township Lodge about a mile north of town.¹³⁸ (Fig. 3.193)

Like their coworkers at Sproul, employees at Claysburg shifted away from their anti-union stance by the 1940s. In 1944 they were dissatisfied enough with company policies to

support a local under the United Construction Workers' Union. Membership was soon transferred to District 50 of the United Mine Workers, then to the United Steel Workers in 1972.¹³⁹ Census takers recorded 714 employees at the Sproul and Claysburg brickyards in 1946. Ten years later the number had fallen to 633, and 350 of those workers were furloughed when a steel strike cut orders.¹⁴⁰ It was an early indication of a downhill trend. In 1958 about 190 were working at Claysburg, and only a maintenance crew of about twelve was employed at Sproul. But in April 1959 the rosters were back up to 458 at Claysburg and about 220 at Sproul. Much of the increase at Claysburg was at the expense of jobs in other localities. General Refractories consolidated all of its silica operations at Claysburg, closing other plants including one at Port Matilda, Centre County. The revival at Sproul did not last long. The plant was closed in December 1960 when orders for open-hearth bricks declined. It was scheduled to reopen in mid 1962 with twelve to twenty men after the closing of a plant at Orviston in Centre County. Machinery was moved from Orviston to Rockdale, Wisconsin and to Sproul and the brickyard there was retooled to manufacture refractory specialties rather than bricks. The conversion was successful, and nineteen of the yard's twenty-two beehive kilns were demolished in 1964.¹⁴¹

While the Sproul plant continues operation in 1992, Claysburg faltered along with the

¹³⁸Claysburg 175th Anniversary, 224. "Claysburg Brick Companies Merge," Altoona Mirror (August 5, 1922). Markley interviews.

¹³⁹Claysburg 175th Anniversary, 99.

¹⁴⁰Pennsylvania Industrial Directories, 1946, 1956. "Steel Strike Idles 350 In County Refractories," Altoona Mirror (July 9, 1956).

¹⁴¹"Claysburg Area Brick Plants Hard At Work," Altoona Mirror (April 22, 1959). "Sproul Operation To Begin In May," Altoona Mirror (March 14, 1962). "Sproul Brick Kilns Set For Dismantling," Altoona Mirror (July 24, 1964).

steel industry. In the late 1970s company spokesmen characterized silica brick making as "a cyclical business," but were optimistic that "some of the peaks and valleys have been evened out to assure a more stable work force and to help keep a smoother running economy in Claysburg."¹⁴² The recession of the early 1980s, however, disrupted any sense of equilibrium. In May 1982 the plant was shut down for lack of orders, and in June it was supporting only twenty shipping and maintenance workers. Forty more were to be called back but only for a few weeks. In 1983 the union local voted "overwhelmingly" to accept concessions, including a ten percent pay cut, elimination of a holiday, and a one-year freeze on supplemental unemployment benefits, in hopes of securing more orders for the coke-oven bricks that were the plant's specialty.¹⁴³

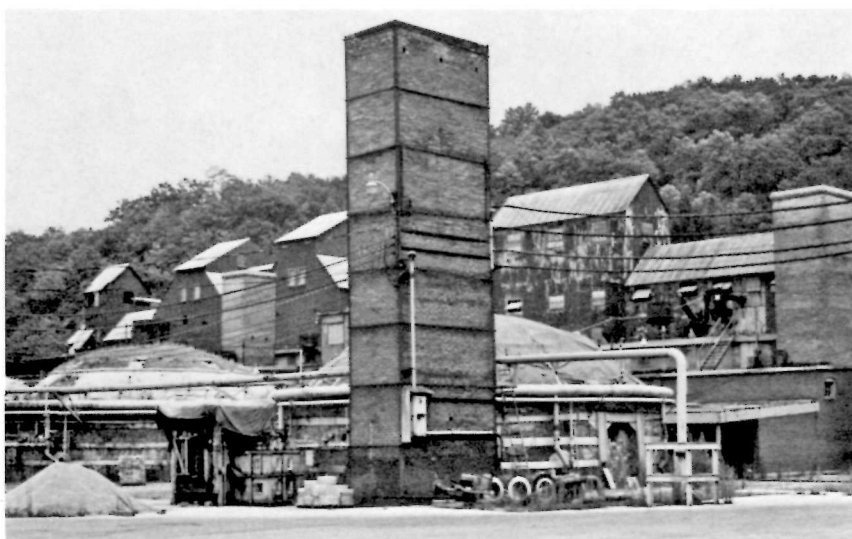


Fig. 3.194 View past gatehouse into General Refractories brickyard, Claysburg, 1987. Photo by Nancy Shedd.



Fig. 3.195 View of General Refractories Claysburg brickyard from gatehouse, 1987. Photo by Nancy Shedd.

During this time, officials at General Refractories reemphasized their industry's dependence on "Big Steel." At Sproul, employees were kept busy because the mortars and mixes they made were used for general maintenance in steel production, but Claysburg's product was used in new construction and the manager was skeptical about the chance for recovery at his plant:

¹⁴²Claysburg 175th Anniversary, 18. "What's That Company Make?" Altoona Mirror (August 23, 1978).

¹⁴³"Claysburg Plant Shutting Down," Altoona Mirror (May 26, 1982). "General Refractories Sets Callback," Altoona Mirror (June 8, 1982). "Brick Workers Agree To Pay Cut," Altoona Mirror (February 10, 1983).

We certainly hope we have a future. If we felt we didn't, we would have shut down a long time ago. . . . but I don't know how much longer we'll be able to withstand this inactivity.

Company vice president Richard Allison, a native of Claysburg, echoed the manager's caution and alluded to the effect a closing would have on the community:

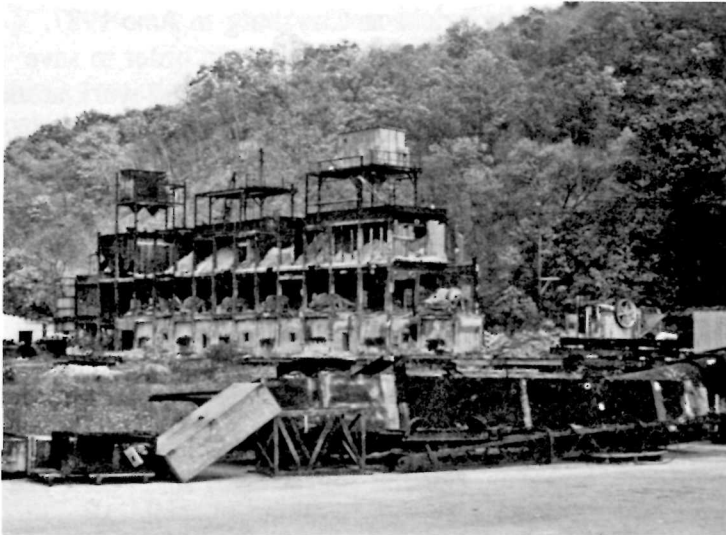


Fig. 3.196 View past gatehouse into former General Refractories brickyard, Claysburg, 1992. Photo by Kim Wallace.

We don't know what the future holds for any of our plants. We are continually evaluating. . . . We have a major investment at Claysburg, and we don't want to walk away from that. And then there are the people; we don't want to walk away from them.¹⁴⁴

Harbison-Walker at Mt. Union and General Refractories at Claysburg were the last two makers of silica bricks for coke ovens and there was some speculation as to

which would close first and give the other the opportunity to survive on the entire silica market. General Refractories made the first move, shifting its silica operations from Claysburg to a plant in Utah at the end of 1984. The Claysburg plant was kept open for small-scale production of specialty bricks. When Mt. Union's plant was closed about a year later, a General Refractories official commented that it was unlikely to have any effect at Claysburg. In 1986



Fig. 3.197 View from gatehouse of scrap and ruins of the General Refractories Claysburg brickyard, 1992. Photo by Kim Wallace.

¹⁴⁴Tom Gibb, "Grefco Awaits Comeback At Claysburg Brickyard," *Altoona Mirror* (November 29, 1983).

many of the 280 men who were laid off in 1982 were still without work and Allison was very straightforward about the bleakness of the situation. "Unfortunately," he said, "the people of Claysburg keep clinging to the hope that there'll be a revival and they'll be called back to work. I don't see that happening." He told reporters that silica brick would never be in demand again and if the company was able to continue operations at Claysburg it would concentrate on the market for "high tech" bricks "used in newer types of mills."¹⁴⁵

Fifteen people were still employed making specialty bricks at Claysburg in June 1987. Their pride at working against the odds to develop a new, high quality product in order to save the plant was very evident. Willard Knisely, president of the union local who started work at the brickyard a week after graduating from Claysburg-Kimmel High School in 1968, spoke for his peers:

We worked so hard--we knew if we got our product in the market we'd be able to come back. We have more work now than we've had in four years. . . . our brick is the best product on the market."

Orders were increasing and they were hoping twenty to twenty-five more employees would be called back to work.¹⁴⁶

Despite their efforts and apparent success, however, General Refractories announced that Claysburg would permanently shut down on July 31, 1987. The explanation given for the closing was the rising expense of workmen's compensation insurance. Although only fifteen employees were working, insurance also had to include fifty others on the call-back list who could make disability claims up to six years after their work ended. Premiums were high for the Claysburg plant because workers who spent so much time working in an environment filled with silica dust from crushed ganister and dried bricks were very prone to silicosis or "white lung," a disease in which healthy lung tissue was replaced with fibrous or scarred tissue. An investigator for the U. S. Public Health Service in 1917 described the effects of the disease: "if we can imagine a man with his chest bound with transparent adhesive plaster, we can form a mental picture of how useless were the efforts at deep inhalation made by these patients." According to one estimate, nine out of ten employees at Claysburg were eligible for silicosis disability when they retired, and nearly everyone in the brickyard towns knew of someone who died of complications from the disease before retirement age.¹⁴⁷

¹⁴⁵Tom Gibb, "Grefco: Future Holds Questions," Altoona Mirror (May 26, 1984). Tom Gibb, "Former Keystone of Mt. Union Business Faces Final Shutdown," Altoona Mirror (November 26, 1985). Kathy Mellott and Tom Gibb, "Hanging On: Brickyard Workers Keep Hoping Despite Forecast," Altoona Mirror (April 12, 1986).

¹⁴⁶"Plant Closing Rocks Claysburg," Altoona Mirror (June 7, 1987).

¹⁴⁷Kathy Mellott, "General Refractories Closing At Claysburg," Altoona Mirror (June 6, 1987). Kathy Mellott, "End of Era: Claysburg's Brick Plant Closes Its Doors," Altoona Mirror (July 31, 1987). Gerald Markowitz and David Rosner, "'The Street of Walking Death': Silicosis, Health, and Labor in the Tri-State Region, 1900-1950," The Journal of American History 77 (September 1990), 544, 531. Silicosis was most common in the silica brickyard towns--Mt. Union, Sproul, and Claysburg--but was also a hazard of the fire-clay brickyards. Lula Ripple, in Salina, attributed her father's death at age 57 to silicosis. Ripple interview. Phillips interview.

Workers were still bitter about the circumstances of the closing when an Altoona Mirror reporter interviewed them a year after their final day at the plant. Willard Knisely was unemployed and believed that:

What the company wanted rid of was us, that's the main reason they shut down. They wanted new employees with clean lungs. . . . At other plants they offered transfers if they were hiring someplace else. We asked them for transfers to other plants. They wouldn't even give use the option to do that because we worked in the silica dust.¹⁴⁸

Only a few of the brickyarders found comparable jobs. Many took part-time and minimum wage positions, and others, like Knisely, were still looking. Darl Burkett commented on how difficult it was for long-time employees to find other work:

There were so many that was half-dead from the dust, and who's going to hire a man half-dead from dust? The company let a lot of old men down. These people worked there all their life.

The men were also worried about the closing's larger effect on their community. The brickyard had been the area's "economic backbone"; its loss would cause a chain reaction affecting people in other jobs, local government and small businesses.¹⁴⁹

Residents of other towns could more easily accept their plants' closings as an uncontrollable result of changes in technology and industry, but Claysburg workers believed they had been given a chance to adapt to the new conditions. They made sacrifices in the form of concessions and a drastic cut in the workforce, and they worked hard to perfect the slag gates and high-carbon bricks that seemed to be in some demand in the steel industry. The closing was a betrayal of their hope and



Fig. 3.198 Company houses across the Frankstown branch of the Juniata River.
Photo by David Ames.

¹⁴⁸Molly Gilmore, "Ex-union Chief: Employees Treated Badly," Altoona Mirror (July 31, 1988).

¹⁴⁹Molly Gilmore, "A Year Later . . . Workers, Community Still Feel Pain of Refractories Closing," Altoona Mirror (July 31, 1988).



Fig. 3.199 Two employees driving a tow motor past General Refractories Company kiln and office building, 1987. Photo by Nancy Shedd.



Fig. 3.200 View north along two rows of beehive kilns from behind office building, General Refractories Claysburg plant, 1987. Photo by Nancy Shedd.

struggle. Willard Knisely missed working with men he had seen every day for nineteen years, and he believed that "General Refractories let this whole community down and left them with a bunch of scrap."¹⁵⁰

A local trucking company leased the brickyard after General Refractories moved out its equipment.¹⁵¹ In 1993 storage sheds and the company office building still stood on the edge of Bedford Street. The eighteen kilns were gone and the crushing and grinding building was being demolished for scrap. Many of the company houses, including those in Little Africa and Shanty

Row, had been torn down years earlier when houses finally seemed an irrelevant and inefficient hindrance rather than a contributing component of plant operations. A number of the company's double houses (Fig. 3.198) and those along Bedford, Spruce and Greene streets were sold to residents. They and others built by local contractors to house workers at the new brickyard make up much of the fabric of Claysburg and will remain long after evidence of the brickyard has been erased.

¹⁵⁰Molly Gilmore, "Ex-union Chief: Employees Treated Unfairly," Altoona Mirror (July 31, 1988).

¹⁵¹Patricia S. Frank, "Claysburg May Get Truck Depot," Altoona Mirror (December 2, 1987).

Chapter 4. *COMPANY HOUSES*

The company town served the purpose of securing a stable work force for the period when that was most crucial to the refractories industry, but the institution was formed with a set of internal contradictions that facilitated its disintegration. Company ownership of housing lasted only thirty to fifty years and in most cases company interest in the gestures of proprietary oversight--company-sponsored social work, schools, stores, sports teams--lasted only a portion of that time. The company town was often seen as a kind of premodern, self-contained and paternalistic society in which the company provided for its workers and workers were obligated to the company. Yet, it was part of a modern economy in which companies ultimately viewed employees only as people with the ability to provide labor; while workers were often dependent on companies for their livelihood, companies could not be held legally responsible for the welfare of employees. This contradiction between reality and the rhetoric of the model company town can be discerned in the planning of company residences. In the company town's strictest form the local plant superintendent was an all-powerful father figure; all other employees were constituent parts of the company family. The hierarchy was often evident in the size and placement of company housing, with a large, stylistically distinctive house for the superintendent placed at a distance (Fig. 3.38), sometimes on an elevation, from the much smaller, identical and unadorned houses for the main body of the workforce. Yet these workers were also viewed



Fig. 4.1 *Brickyard crew at one of Harbison-Walker's Pennsylvania plants. Collection of H-W Retirees Committee, undated.*



Fig. 4.2 Scrapbook page of photos taken near the H-W brickyard at Phillipsburg, Clearfield County.
Collection of H-W Retirees Committee, undated.

ideally as self-determining, rational individuals in a democratic society. They were expected to fend for themselves when the company no longer needed them. Their houses were most often detached or semi-detached for individual families and their uniformity symbolized the equality of

working men. (Fig. 3.33)

Industrial capitalism had fostered republican individualism by its atomization of society into discrete individuals dependent on their ability to sell their own labor.¹ In its late nineteenth- and early twentieth-century ascendancy it also encouraged various forms of incorporation, perhaps best represented by company towns and the manufacturing policy of vertical integration--control of raw materials, production, distribution--followed by business leaders like Andrew Carnegie.² The interdependent evolution of individualism and centralization of power was a contradiction addressed in various ways by members of industrializing society--from Carnegie's donation of libraries for individual self-education to Progressive social workers' establishment of neighborhood community aid centers to labor organizers' promotion of class solidarity. An industrial engineer working at the turn of the century described the changes he and his contemporaries were living through:

The ten years just past have been characterised above all by mechanical progress and, as its corollary, by centralisation of industry. The factory system has drawn the working community toward foci, with ever-increasing intensity. Economy of production--the great all-controlling influence in the modern material world--requires the concentration of power in huge units, and about these cluster ever-growing and ever-denser swarms of machine tenders--workers of every grade.³

At the same time there was this impulse for consolidation and for the formation of things like company towns, he noted the corollary and potentially contradictory impulse; "not the least characteristic result of the age of machinery has been the development of individuality in the worker."

The company town was a way of gaining some control over the rather frightening prospect of "ever denser swarms of machine-tenders" by setting the framework of social organization, and for a time, rationalization and streamlining of factory production could logically include maintenance of such apparently peripheral concerns as a general store, school, and houses.⁴ But by the late 1940s company properties outside the brickyard walls seemed both an

¹Ideas about the equality of individual citizens went hand in hand with the development of capitalist economies. E. J. Hobsbawm, *The Age Of Revolution, 1789-1848* (New York: New American Library, 1962), 17-18. Carroll Smith-Rosenberg, "Bourgeois Discourse and the Age of Jackson," in *Disorderly Conduct: Visions of Gender in Victorian America* (New York: Oxford University Press, 1985), 79-89, 107. Linda Kerber, "The Republican Ideology of the Revolutionary Generation," *American Quarterly* 37 (Fall 1985), 488-89. Barbara Jeane Fields, "The Advent of Capitalist Agriculture: The New South in a Bourgeois World" in *Essays on the Postbellum Southern Economy*, Thavolia Glymph and John J. Kushma, eds. (College Station, Tex.: Texas A & M University Press, 1985), 75.

²Alfred Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, Mass.: Harvard University Press, 1977), 285-86.

³Charles Buxton Going, "Village Communities of the Factory, Machine Works, and Mine," *The Engineering Magazine* 21 (April-September 1901), 59.

⁴John Reys, "The Towns That Companies Built" in *The Making of Urban America* (Princeton: Princeton University Press, 1965), 420-21.

economic and conceptual overextension of company resources. By the 1960s, neither town residents nor company officials could see the relevance of houses to plant operations. They explained company divestment of houses as a decision to "get out of the real estate business."⁵ Sixty years earlier houses were understood as part of the refractories business. The dismantling of these company holdings signalled another restructuring, one that included the repudiation of the responsibility for maintaining the company town.

Brickyard Towns and Houses

As the eight towns in this study show, there was wide variation within the company town framework. Circumstances at each plant site--local history, topography, residents, and company management--made each place represent a different possibility for the expression and experience of the company town.

Kistler and Sproul are perhaps the two "purest" examples of the company town in this study. In both, the company built and maintained virtually all of the buildings as well as the infrastructure of roads, water and electricity supply. Yet these towns represent two very different approaches to company town design. At Sproul, General Refractories commissioned a local contractor experienced in building company houses. He built five identical houses for the brickyard foremen. They were of modest colonial-revival style with living room, dining room, and kitchen, four bedrooms, and a full bathroom--amenities and a generous size befitting their



Fig. 4.3 General Refractories Company foreman's house, Railroad St., Sproul, 1991. Photo by David Ames.



Fig. 4.4 General Refractories Company houses, view east along Reed St., Sproul, 1991. Photo by David Ames.

⁵Carl C. Muffley, interview by author, Salina, Pa., June 29, 1991. When General Refractories turned over the Sproul water system to a residents' committee, the *Altoona Mirror* used the same phrase: the company "was getting out of the water business," "Sproul Takeover Completed," (October 13, 1982).

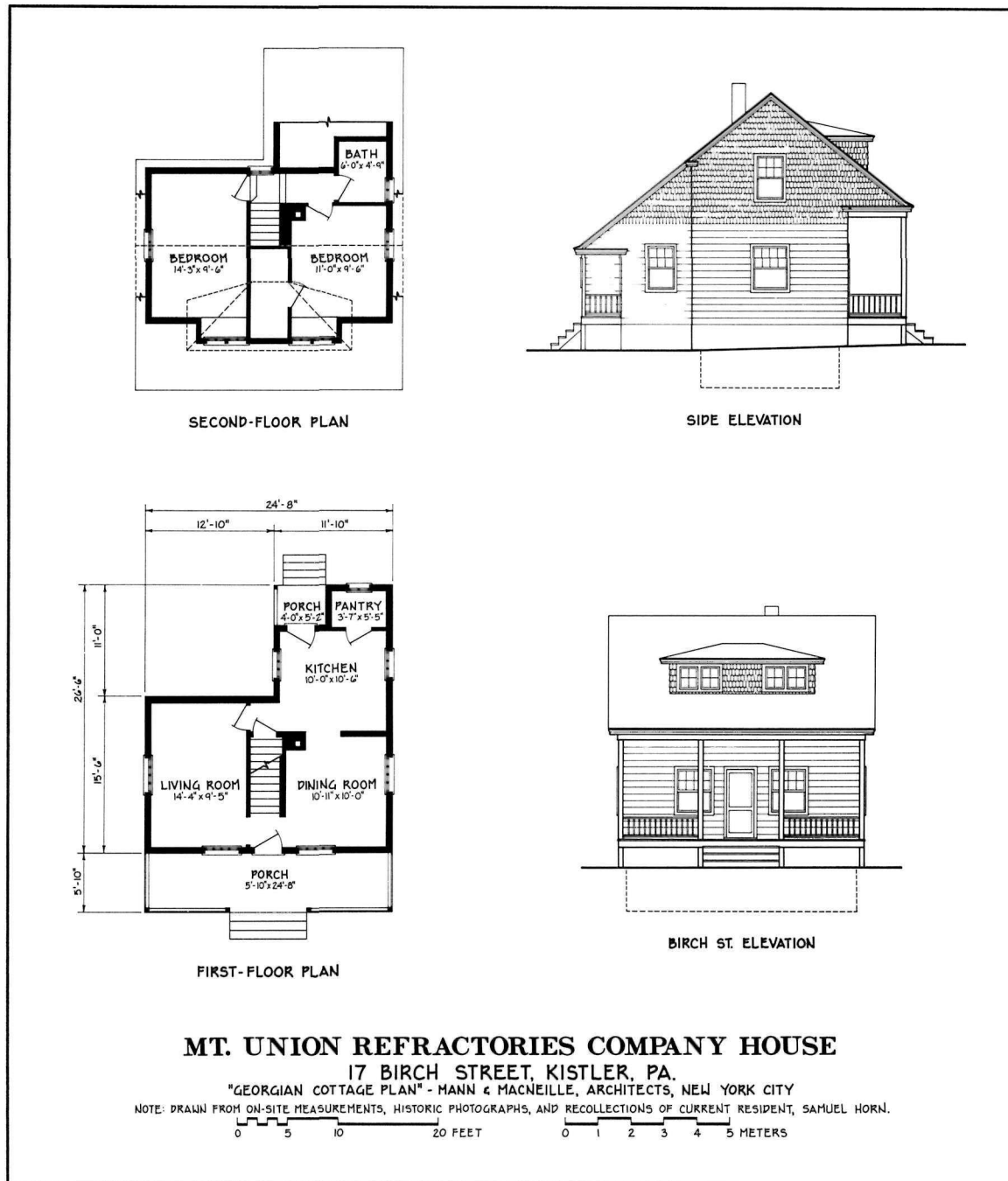


Fig. 4.5 Floor plans and elevations, Mt. Union Refractories Company house, 17 Birch St., Kistler. Drawn by Isabel Yang.

management-level occupants. The remainder of the houses, also identical, were derived from local vernacular buildings. (Figs. 4.3-4) They had a traditional hall-parlor-and-rear-kitchen floor plan with an off-set front door, three small bedrooms on the second floor, and minimal plumbing to the kitchen. Unlike the individual and irregular siting of local houses, however, these were regimented in close-set rows along the town's simple grid plan.

At Kistler the company commissioned nationally prominent architects to design a town and all its buildings. Six different house designs were comparable in scale to those for workers at Sproul but included bathrooms and living and dining rooms. (Fig. 4.5) These more modern floor plans were incorporated in nationally popular, colonial-revival designs, and in ironic contrast to the vernacular houses at Sproul, each Kistler design was named for the vernacular form that inspired it. The architects appropriated these vernacular styles because of their belief that the architectural character of buildings could mold the moral and social character of their inhabitants. Kistler's population would be a mixture of native-born, white Americans; immigrants; and African-Americans, all of whom might not be accustomed to the middle-class life style and regulated work style envisioned for them there. The architecture was intended to influence them towards the desired behavior.⁶ The vernacular style would encourage a hard-working, salt-of-the-earth steadfastness; the modern and mainstream aspects of the designs would foster an aspiration to American, middle-class values. Sproul residents were recruited exclusively from the local native-born population. Presumably, they already possessed qualities associated with the American vernacular. They were given familiar houses under organized and controlled

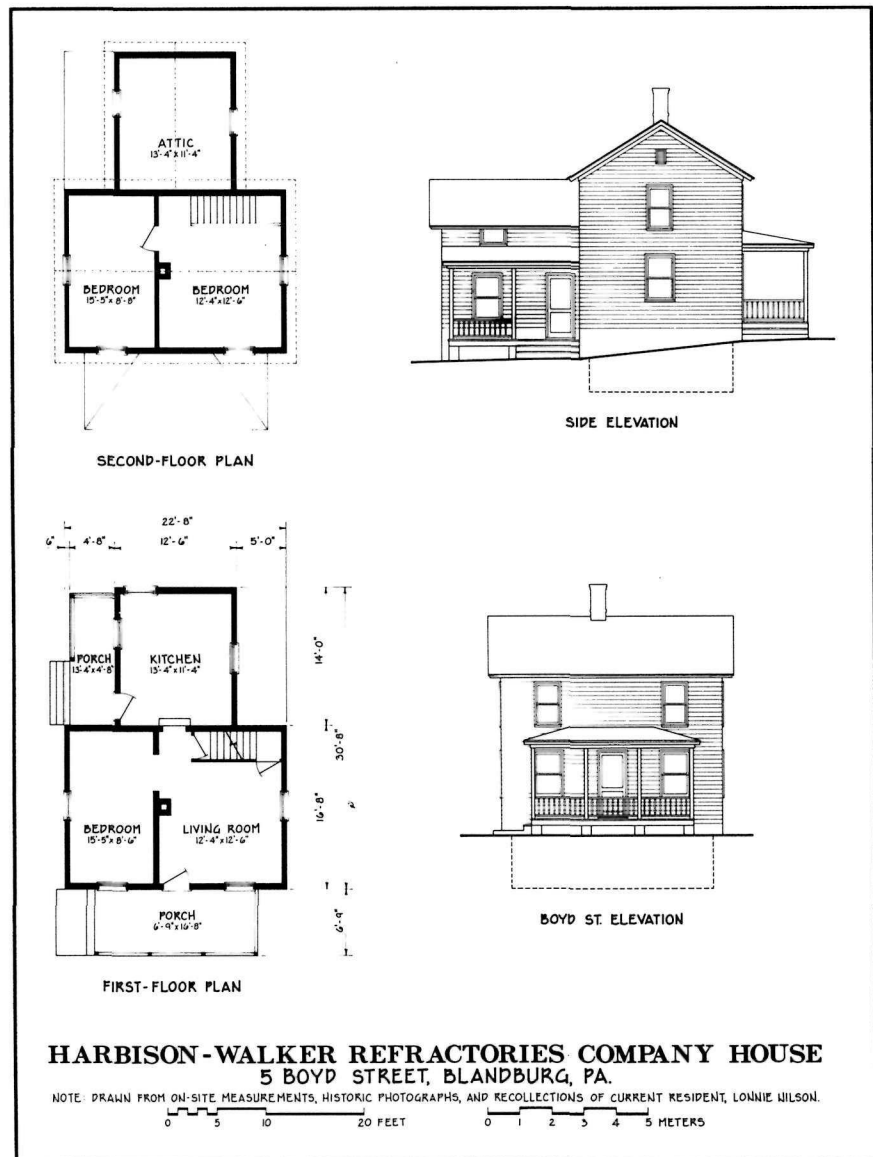


Fig. 4.6 Floor plans and elevations, Harbison-Walker Company house, 5 Boyd St., Blandburg. Drawn by Isabel Yang.

⁶John Nolen, "A Village for Factory Workers: Kistler, Pennsylvania" in *New Towns for Old: Achievements in Civic Improvement in Some American Small Towns and Neighborhoods* (Boston, Marshall Jones Company, 1927), 73-74. Gwendolyn Wright, "Housing Factory Workers" in *Building the Dream: A Social History of Housing in America* (Cambridge, Mass.: The MIT Press, 1981), 65.



Fig. 4.7 Harbison-Walker Company house, 5 Boyd St., Blandburg, 1991. Photo by David Ames.



Fig. 4.8 Harbison-Walker Company double house, Boyd St., Blandburg, 1991. Photo by David Ames.

conditions.

At Bolivar and Robinson a combination of factors explain the relatively weak company housing policy. The brickyards at Kistler and Sproul were built in a period when the state of the art was to include company housing. Those at Bolivar and Robinson were much older and were undergoing financial instability during the peak company housing period. The multiple brickyards and partnerships were probably another deterrent to a longer-term, concerted residential building effort. A third factor may have been that the owners were local residents. The workers seemed more reliable because they were familiar, and there was less need for the distanced management techniques of absentee owners.

The earliest company housing in this study was built at Blandburg in the early 1890s at the same time as its brickyard. The first houses were very similar to those at Sproul and were probably for families drawn from the immediate area. (Figs. 4.6-7) After Harbison and Walker bought the brickyard in 1893, it moved these houses as part of its reorganization of the plant site according to more modern, efficiency-conscious standards. They were put on an axis with the brickyard, and over the next few

years five more house forms were built along two streets between the brickyard and the original town (Fig. 4.8). There are several examples of a side-gable, double house reportedly built in the 1890s, and of a similar double house built perhaps ten to fifteen years later. Two different single-family designs were included in the expansion: a two-story, front gable house and a one-story, front-gable bungalow with wood-shingle siding. (Figs. 4.9-10) These houses appear to

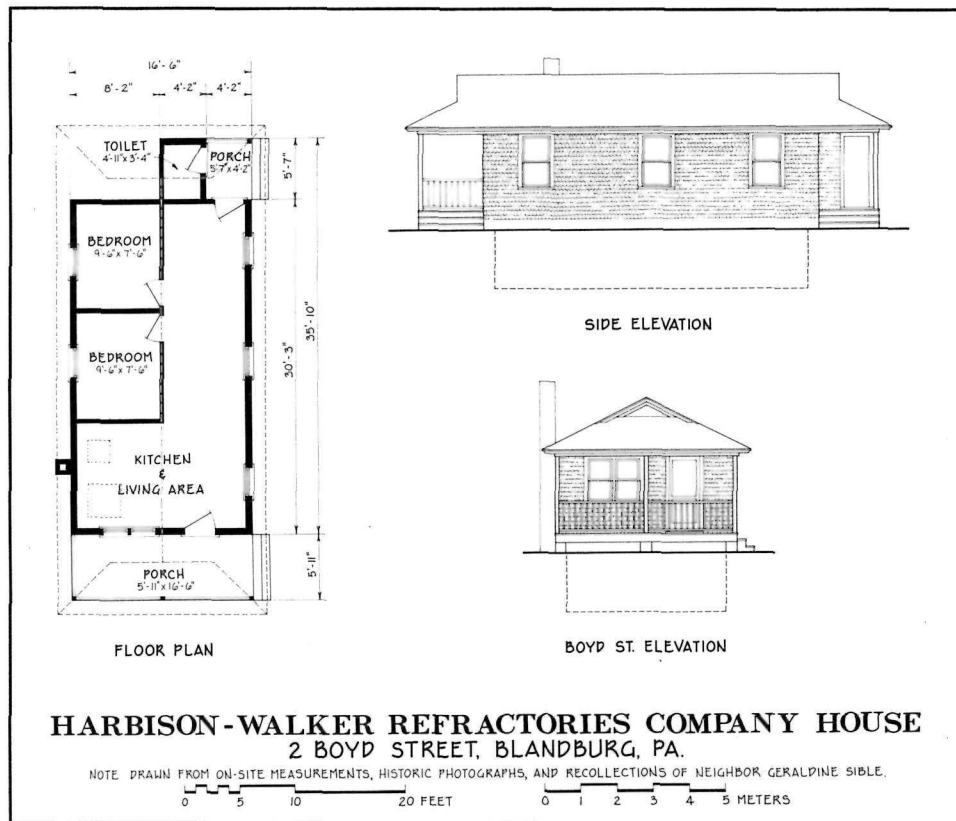


Fig. 4.9 Floor plans and elevations, Harbison-Walker Company house, 2 Boyd St., Blandburg. Drawn by Isabel Yang.



Fig. 4.10 Geraldine Sible on the porch of a former Harbison-Walker Company house, 4 Boyd St., Blandburg, 1991. Photo by David Ames.

have been adapted by company engineers from both vernacular--in the case of the side-gable houses--and more popular designs. The new recruits who lived in them included Greek, Hungarian, Polish, and Czechoslovakian immigrants. In 1916 a company publication called the residential development "haphazard," perhaps in reference to the lack of organization in the placement of the different house forms. In compensation and

to encourage coherence and assimilation, two programs--for landscape beautification and social work--were instituted, making an explicit link between the influence of physical and social surroundings.

At Salina, company housing was built between 1900 and 1915 as a modernization of the already well-established brickyard, and the construction was very orderly and uniform. The

houses on the main street, "the point," and "twenty row" were efficiently engineered in their use of both exterior and interior space. (Fig. 4.11) Their front-gable orientation and one-room width

allowed them to be placed on narrow lots and gave the streets an almost urban density. Inside, there was a front living room, a rear kitchen, and two bedrooms on the second floor. In its second building stage, the company turned to somewhat larger, more modern floor plans with kitchen, living and dining rooms, but these houses were equally spare in their design and were given the same black and white exterior paint scheme. Just ten years after they were built, the company moved on to pioneer the next form of modernization, completely redesigning and retooling the brickyard proper.

Harbison-Walker's Ganister Hill neighborhood in Mt. Union also exhibited the tell-

tale marks of the company engineer. Early photographs show two house forms--a front-gable, two-bay, single-family house and a side-gable, four-bay, double house. They had a rigid, box-like symmetry devoid of ornamentation. Set in ordered rows just beyond the brickyard fence, they overlooked the brickyard on two sides. (Fig. 1.13) At no other town were the houses' function as an extension of the brickyard made quite so clear by proximity and design.

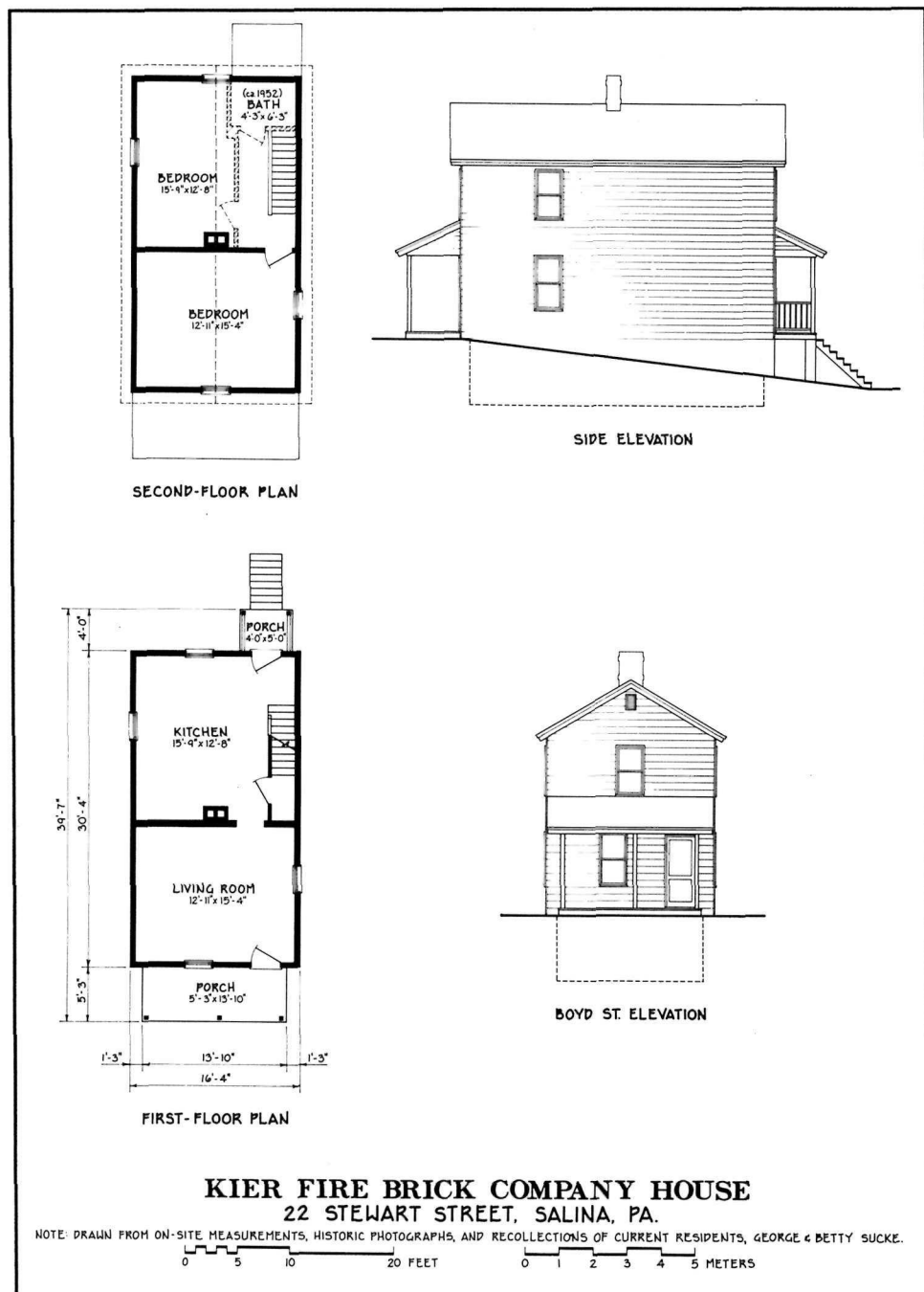


Fig. 4.11 Plans and elevations, Kier Fire Brick Company house, 22 Stewart St., Salina. Drawn by Isabel Yang.

Across town, General Refractories' layout was less coherent, perhaps because it was the third company to choose a site and the third in size and production. It built houses on lots that were available along Shirley Street and along the railroad on Pennsylvania Avenue and Water Street. Both groups were several blocks distant from the brickyard and were plan-book type houses with some stylistic features that made them blend in with their neighbors. Room was found for seven two-story houses immediately adjacent to the brickyard. On the opposite side of the brickyard, away from the town, was General Refractories' "shanty town" of small, one-story houses. Nearby was Mt. Union Refractories' shanty town, ironically nicknamed "Little Kistler." Shanties were a common and expedient company house form. They were also represented in Sproul, Salina, and Claysburg, and like the two sites in Mt. Union, were usually somehow set off from the rest of the town.

Two-family, double-house shanties at Claysburg made up the "Little Africa" section of town as well as the "shanty row" along the railroad track behind a row of managers' houses that fronted on Main Street (Fig. 3.186). Claysburg was unusual in the number of high- and low-scale company houses and in the number of privately built houses that could easily be mistaken for company houses. The variety of substantial managers' houses may be explained by the local residence of company officers. Local builders and landlords provided mid-range houses including rows of identical one-and-a-half-story bungalows and two-story, gambrel-roofed houses west of the brickyard (Figs. 3.184-85). More typical examples of company housing were the two-story double houses built across the Frankstown river branch at the foot of Dunnings Mountain. (Fig. 3.198)

Refractories company houses were not linked by their forms or planning. They were just as varied as the brickyard towns they were built in. Some were built in local vernacular forms, some were nationally distributed plan-book forms, some were designed by architects, some by company engineers, some by local builders. Construction dates that fall within about a thirty year period are the houses' most salient common feature. While the brickyards in these Pennsylvania towns were built as early as the 1840s, the company houses were all built between 1893 and 1926. This period of construction was mirrored by an even shorter period between 1944 and 1966 when the companies divested their residential properties--most by sale, some by demolition. These two sets of dates bracket the peak years of the company town and represent a dramatic cultural and economic shift. Explaining them led me to two very different conclusions about the nature of company houses--first, that company houses functioned as an element of brickyard machinery insuring sufficient production, and second that "company house" is a loaded term for a house that is really no different from any other. Though they may seem incompatible, both conclusions can be simultaneously true. Each will be elaborated in the following sections in relation either to the period of construction or divestment.

Building Company Houses

The first conclusion--that houses were a form of brickyard mechanization--was derived from the first set of dates. Houses were built between 1893 and 1926. These years overlap two periods--one in the general history of the refractories industry, the other in the history of its technology; each contributes a different facet to the conclusion. First, demand for refractories accelerated in the 1890s and peaked about 1926. The coincidence of the time frames of housing

construction and industry expansion strongly suggests that the construction of houses represented the industry's response to the rise in demand. Companies consolidated control over their operations and resources, including the labor force, to meet and take advantage of rising demand.

When the Department of Labor sponsored a survey of company housing in 1916, companies reported a variety of reasons for building houses. Forty-three companies, about 12 percent, believed providing housing was necessary to secure any workers at all because their factories were in areas with little available housing.⁷ Isolated sites and housing shortages characterized most of the brickyard towns in Pennsylvania. In places like Sproul and Salina there was no pre-existing town near the clay mine to house workers. In Mt. Union employees for three brickyards and the powder factory competed for housing. Yet at any of these sites the companies might have encouraged private development rather than diverting their own capital to solve the problem. Private housing apparently satisfied the demand during Salina's first twenty-five years, and in Bolivar and Robinson, several brickyards and coal mines were able to keep employees without building a large subdivision like Harbison-Walker's Ganister Hill in Mt. Union or a model town suburb like Kistler.

Company housing was not a simple response to a housing shortage. An engineer writing in a professional journal in 1919 expressed some of the more common and more complicated reasons for company-built housing. He urged that employee housing be acknowledged and treated as an extension of the factory complex:

As engineers, we design and write the specifications for the machinery to accomplish a definite purpose, and proceed to house it, provide the necessary building with their accessories in the way of cranes, or heating systems, or sprinkling systems, as the case may be. There is no reason why the operating force should not be built up in very much the same way: design the organization, write its specifications so that the employment department can secure the proper men, and then house that organization with just as much thought and care as is given the plant. . . . Proper surroundings and a comfortable, convenient house of good appearance exercise an influence that cannot be denied, and an employee situated in such surroundings is far more inclined to follow the policies of his employer and take an active part in furthering them than one dissatisfied with his home and surroundings. . . .⁸

Most of the respondents to the Department of Labor's 1916 survey justified building company housing in similar terms. To improve the labor force and, by extension, production levels, companies made an analogy between machinery and the people who operated it and added psychology to the list of tools used to keep them up to proper running order. Of the 348 companies surveyed, seventy-five claimed that their housing "secured a better class of workmen." Forty-seven companies believed the primary benefit was "greater stability in the labor force." Forty-eight companies found that living in company houses made their workers more

⁷Magnusson, Housing By Employers in the United States (Washington, D. C.: Bureau of Labor Statistics, U. S. Department of Labor, 1920), 247.

⁸D. Eppelsheimer, "Discussion on Housing," Transactions of the American Institute of Mining and Mechanical Engineers 60 (1919), 815.

"contented," loyal, and cooperative.⁹

The company town at the turn of the century was the creation of a business community under the imperative of building an industrial infrastructure. Labor was at a premium and maintaining vigilant control of labor was justified in order to insure uninterrupted production. Control was made more important by the perceived threats to social order posed by organized labor, and by large numbers of immigrant and generally "lower class" workers.

Modern management methods in which workers were treated as one more element of plant machinery was a convenient way of achieving efficient production and a distancing control. When they were successful, the psychological management strategies deployed under this philosophy--company social work, ball teams, the company town in general--might have seemed an example of enlightened paternalism preserving personal social relations in an impersonal age, but they were ultimately strategies that were discontinued when they became culturally obsolete and no longer seemed cost effective.

The timing of mechanization was the second factor in refractories industry history contributing to the construction of houses between 1893 and 1926. The technology to mechanize refractories production began to be put into operation between the 1890s and 1920s. Brickmaking machines were available in the 90s, but they were new and just beginning to be integrated in production. Handmolding of bricks and shapes continued well into the 1940s. Even when brick presses became more common in the first decades of this century, this only increased the need for hand labor, because it increased exponentially the number of bricks that had to be dried and burned, stages which were not successfully automated until 1928. Brickmaking remained a very labor intensive undertaking through the 1920s. The chronology of mechanization as traditionally defined lagged behind that of the industry's efforts to meet rising demand. Yet, when the construction of houses in this period is inserted in this chronology and considered in the context of the industry's expansion, company housing can be seen as a form of management mechanization that functioned in lieu of machine mechanization. It helped secure and control the large number of stable workers that companies needed to make bricks. Viewed



Fig. 4.12 Isabel Yang with scale stick, Samuel Horn and neighbor at 17 Birch St., Kistler, 1991. Photo by Kim Wallace.

⁹Ibid.

Delightful Claysburg Pageant Depicts Life In Pioneer Days

By ELLA M. SNOWBERGER

With the lights and multitudinous activities of the carnival for a backdrop, nature put on the real show at the sesqui-centennial pageant at Claysburg last evening. The lingering afterglow which etched the strata of clouds resting

Amateur Contest Is Top Feature Tonight

A three-day all-expense paid trip to New York city will be the prize awarded to the winner of an amateur contest tonight as part of Claysburg's sesqui-centennial celebration.

Ten contestants have been selected by audition from a group of 34 entries to compete in the show to be held at 8 o'clock at the High school athletic field. Second and third prizes will be cash awards.

Tomorrow, veteran and fireman groups from the Central Pennsylvania area will take part in a parade slated for 7.30 p. m.

above the mountains, guarded by the evening star as a sentinel high in the heavens, was breathtaking.

They had a full house. Virtually every seat in the amphitheatre was taken. The pageant offered yet another demonstration of the whole-hearted way the people of Claysburg have joined together to make the big celebration outstanding.

The various scenes covered the history of the town thoroughly, showing the people at work and at play. The play scenes were ex-

hibited recreation enjoyed by the people in the different periods of the history of the town.

As a whole, the pageant was well conceived and exceptionally well portrayed. One missed the fanfare of trumpets or other musical introduction of the different acts. It lagged a little in spots but it was a good show as every one present will agree. The Indian council fire scene and dance was very effective.

The arrival of the first settlers and the surveying of the town lots by John Zeth and his assistants were excellent. The comedy note introduced by the assistants wiping off Zeth's glasses to help him to see straight was appreciated by the audience.

The homecrafts of the pioneer women and the skills of the men who converted the raw products of the wilderness into the essentials of daily living were very good. Many in the audience had never before seen how wool was carded and spun into thread. The men performed equally well in showing how to make hickory brooms and wooden toothed hand rakes.

The wedding scene provided the contrast of exquisite loveliness. How the girls must have shivered in their filmy costumes. The singing by the girls and the music of the Steel Mountain boys, everything on the musical program was very good in any language.

But the stars were the riders in the fantastic costumes who celebrated New Year's day by riding through the countryside throwing the children offerings of candy after scaring them half to death. Never did the young men of long ago ride like that. They did not

DEMONSTRATE BRICK-MAKING ART



Demonstrating the art of making silica brick by hand during the sesqui-centennial pageant presented Wednesday night at Claysburg are Charles Black and Elmer Davis, both employed by General Refractories company. Machines now are used almost entirely in the brick manufacturing industry.

SETTLERS IN CLAYSBURG PAGEANT

Fig. 4.13 Clipping of newspaper report on Claysburg's 150th anniversary pageant. *Altoona Mirror* (August 19, 1954).

from the perspective of the brickyard, company housing can be interpreted as a piece of brickmaking technology.¹⁰

Deconstructing Company Housing

In 1954 Claysburg observed its 150th anniversary. In honor of the occasion local residents staged a historical pageant reenacting events in the town's history and demonstrating "pioneer" skills outmoded by modern life. Women in long calico skirts carded and spun wool and men made hickory brooms and rakes. In one scene two General Refractories employees

¹⁰As partial precedent for this view of company houses, see: Daniel Nelson, *Managers and Workers: Origins of the New Factory System in the United States, 1880-1920* (Madison, Wis.: University of Wisconsin Press, 1975), 91, who notes that "the manufacturer viewed the company town as little more than an extension of the factory layout;" and Thomas P. Hughes, *American Genesis: A Century of Invention and Technological Enthusiasm, 1870-1970* (New York, Penguin Books, 1989), 3, 5-6, who primarily defines technology as "the means of production" of goods and services and writes that technology should be seen in terms of systems rather than as isolated "hardware, devices, machines and processes."

stood at a table piled with clay and demonstrated "the art of making silica brick by hand."¹¹ (Fig. 4.13) Hand molding was commemorated because it was central to the town's history and livelihood and because it had been almost entirely replaced by machine. The pageant marked the first historicizing of the Pennsylvania refractories industry and the beginning of the dismantling of the brick company town.

The second conclusion about company houses is drawn from the period of divestment between 1944 and 1966 when the companies got rid of their houses. Focusing on these years when company houses technically ceased to be company houses encourages an examination of the assumptions that underlie the term and urges the conclusion that, from its construction, a company house is a house just like any other. Residential

divestment was a phase in the decline of the Pennsylvania refractories industry and of the larger deindustrialization of the nation's industrial heartland. To investigate and understand the history of this period, it is useful and even necessary to think of it in postmodern terms; the history of the sale and demolition of company houses involves deindustrializing material culture and



Fig. 4.14 General Refractories Company office, now Red Cross office, and superintendent's house, Market St., Mt. Union, 1991. Photo by Kim Wallace.

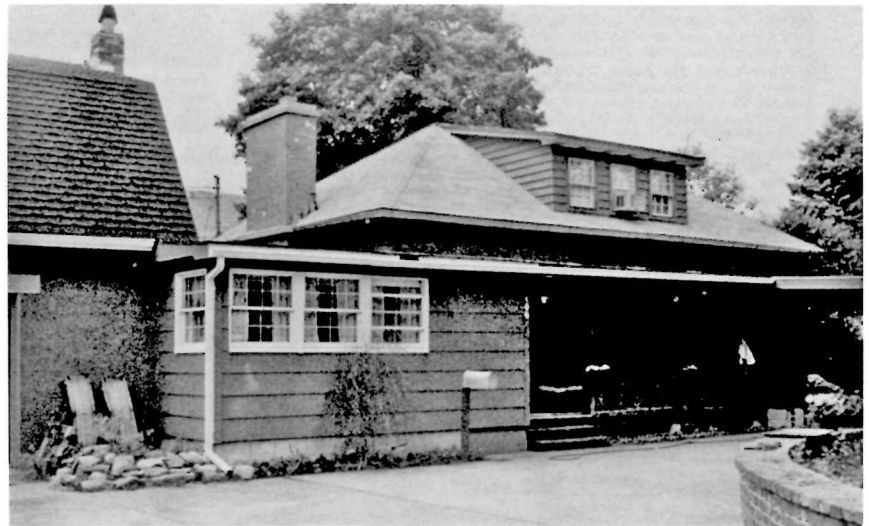


Fig. 4.15 General Refractories Company weigh shed remodeled as a residence, 106 S. Green St., Mt. Union, 1991. Photo by Kim Wallace.

¹¹Ella M. Snowberger, "Delightful Claysburg Pageant Depicts Life In Pioneer Days," *Altoona Mirror* (August 19, 1954). "Depicts Phase of Industrial Activities" (photo), *Altoona Mirror* (August 18, 1954).



Fig. 4.16 Covering asbestos siding with vinyl siding, State St. and Bratton Rd., Kistler, 1991. Photo by Kim Wallace.

"deconstructing" company houses.¹² The material objects produced by a society are central in many ways to the phenomenon of deindustrialization. Houses are not usually considered as industrial objects, yet they were clearly planned and constructed as part of the industrializing effort, and they were dismantled or disowned much like other plant property during deindustrializing. Such physical dismantlings of settings that people assumed were permanent

were accompanied by transformations in other cultural forms and social structures. These

¹²There is a significant literature on deindustrialization. Some of the works include: Barry Bluestone and Bennett Harrison, *The Deindustrialization of America: Plant Closings, Community Abandonment, and the Dismantling of Basic Industry* (New York: Basic Books, 1982); Michael J. Birkner, ed., "Deindustrialization: A Panel Discussion," *Pennsylvania History* 58 (July 1991), 181-211. I am aware of no published work that addresses directly the place of material culture in this process. Jim Abrams, folklorist with AIHP and the Pennsylvania Historical and Museum Commission, is working on related issues: Abrams, "Lost Frames of Reference: Cultural Recovery and the Crisis of Tradition in the Pennsylvania Coal Fields" paper delivered at the Public History Association conference "Cultural Conservation: Refiguring the Cultural Mission," Washington, D.C., May 1990. There is perhaps an even larger literature on deconstruction, a term that refers to both a theory of language and a related method of literary criticism. Alison Lurie, in "A Dictionary for Deconstructors," *New York Review of Books* (November 23, 1989), provides a sketch of the field in which she compares deconstructing language in order "to demonstrate underlying inadequacies, false assumptions, and inherent contradictions" to taking apart a building in order to reveal "flaws, and expose the illusions or bad faith of the builder." In transferring this method to history, I want to adopt the practice of questioning or "deconstructing" the meaning of categories or concepts that are taken for granted. I think that borrowing from this theory is appropriate because it encourages the critical thinking that is already part of historical inquiry and because it can enrich and enliven the practice of history. In this instance, I would like to begin to link the fields of postmodernism, of which deconstruction is a part, and of deindustrialization. Both provide ways of understanding recent history, but are rarely used in conjunction because they originate from different philosophical positions and tend to be segregated among disciplines on either side of the divide between the humanities and the social sciences. I am invoking them both here to emphasize that company housing and these eight brickyard towns should be understood as part of larger cultural and economic processes and to bring these larger processes into focus at a specific site and in a specific experience. Peter N. Stearns in "Social History Update: Encountering Postmodernism," *Journal of Social History* 24 (Winter 1990), 449-52, sketches some of the difficulties and potential benefits of postmodern approaches for historians. Howard Brick in "Optimism of the Mind: Imagining Postindustrial Society in the 1960s and 1970s," *American Quarterly* 44 (September 1992), 348-80, notes the natural, yet dualistic association between "postmodern," used to discuss cultural expression, and "postindustrial," used to discuss sociological issues. One hallmark of postmodern, and particularly post-structuralist, thought is the tendency to collapse the theoretical divisions between the realms of culture and society or superstructure and infrastructure. Michel Foucault does this from the direction of culture; Stuart Hall from the direction of society. For representative writings see, Foucault, *Power/Knowledge: Selected Interviews and Other Writings, 1972-77* (New York: Pantheon Books, 1982) and review of same by Ian Hacking, "The Archaeology of Foucault," *New York Review of Books* (May 14, 1981), 32-37; Hall, "Signification, Representation, Ideology: Althusser and the Post-Structuralist Debates," *Critical Studies in Mass Communication* 2 (June 1985): 91-114.

changes are characteristic of what is often called postmodern culture and society. A form of cultural analysis called deconstruction, which "deconstructs" or scrutinizes categories and assumptions often taken for granted, grew out of and seems appropriate for this environment.

The period of divestment of company residential property is crucial to the history of company towns. It mirrors the period of construction and illustrates the reversal of the received knowledge on the efficiency of factory operations--as the understanding of "efficiency" changed from building and maintaining company houses to getting rid of them. The means of divestment and reaction to it are also important because they provide an opportunity to examine ideas about housing and company houses.



Fig. 4.17 Mt. Union Refractories "Vermont Farmhouse," Pine St., Kistler, with new porch and blue siding, 1991. Photo by Kim Wallace.

There were two alternatives in the streamlining movement refractories companies conducted in the mid-twentieth century. In 1944 North American Refractories chose one when it began selling its houses in Kistler. Across the river in Mt. Union, Harbison-Walker took the second; it demolished the entire Ganister Hill neighborhood. The decision to sell the houses or tear them down seems to have depended on how closely they compared to the ideal single-family, American house and whether they formed a neighborhood geographically independent of the brickyard. General Refractories' one-story shanties in Claysburg were not among the houses the

company sold to residents in the mid-1960s. Like those in Sproul, Little Kistler and the shanty town in Mt. Union, they were deemed unfit to be passed into the private housing stock and were demolished.¹³



Fig. 4.18 Boyd St., "Yellow Row," Blandburg, 1991. Photo by David Ames.

When General Refractories closed its plant in Mt. Union at about the same time as the Claysburg pageant, the brickyard and seven adjacent two-story houses were leveled. The company office building, superintendent's house and a

¹³The one-story houses near the brickyard in Salina were destroyed in the 1936 flood.



Fig. 4.19 Refractories used as porch and stairway foundation, Swank Refractories company house, Irvona, Clearfield County, 1991. Photo by Kim Wallace.

weigh shed were spared because they were on a line with residential streets rather than with the brickyard property. The house continued as a residence, the office became the local Red Cross headquarters, and the shed was converted into a residence. (Figs. 4.14-15) Harbison-Walker's houses on Ganister Hill formed a sizable neighborhood of Mt. Union, but their situation on the far side of the brickyard from the town meant that it could not be integrated as a contiguous

neighborhood and that it obstructed access to the rest of the company's property. In the early 1950s, the houses were sold to residents, but only for the right to tear them down and salvage the materials.

In all the other towns the company house communities were distinct enough from the brickyards to support a conversion to private ownership, and they were cut loose to function on their own or to be absorbed into bordering municipalities. North American Refractories initiated residential divestment and sold their Kistler houses according to a policy followed by all of the companies of giving first option to the current residents. Sales were completed next at Mt. Union and Blandburg, and by 1966, the last deed transfer for all the towns had been recorded.



Fig. 4.20 Refractory bricks used as paving between houses, Blandburg. Photo by Kim Wallace.



Fig. 4.21 Refractory bricks used as paving in a yard on Reed St., Sproul. Photo by Kim Wallace.



Fig. 4.22 *U.S. Post Office at Mt. Union, 1991. Photo by Kim Wallace.*

The companies' decision to get rid of their houses was a delayed recognition that changes in economic conditions and management and operating policies had made them extraneous, obsolete pieces of brickyard machinery. In turn, the sales prompted other reevaluations of company houses. For many long-term residents, divestment gave them their first unbounded opportunity to use their house as a means of self-expression.

Soon after the transition to

private ownership, individualistic alterations destroyed the uniformity of the company town streetscape. (Figs. 4.16-17) New owners changed exterior paint colors and also invested in asphalt and aluminum siding to improve their home's insulation, appearance, and save the cost of periodic repainting. They made cosmetic changes indoors as well, but the most common interior improvements were the installation of bathrooms and updated heating systems. These kinds of alterations can be seen as practically and symbolically marking the difference between the private and the company house. They represent the individual owner's rights of self-determination and freedom of choice, and the sale of the houses to their tenants is easily interpreted as the long-overdue granting of those rights. But company housing as a concept, practice, and experience was much more complicated.



Fig. 4.23 *Mailbox base built of refractory bricks from three Mt. Union brickyards. Photo by David Ames.*

The term "company housing" often carries a negative connotation. It is derived in part from the implication that the inhabitants' rights were always limited, but company houses and company towns have a history of being portrayed as drab, oppressive places to live, and the presumption was based more on reactions to their appearance than a concern that democratic principles were being thwarted. A 1946 government report on coal mining towns described them as having "monotonous rows of houses and privies, all in the same faded hues, standing alongside the railroad tracks



Fig. 4.24 Steve Andrews with tools from the Harbison-Walker brickyard, Blandburg, 1991. Photo by Kim Wallace.

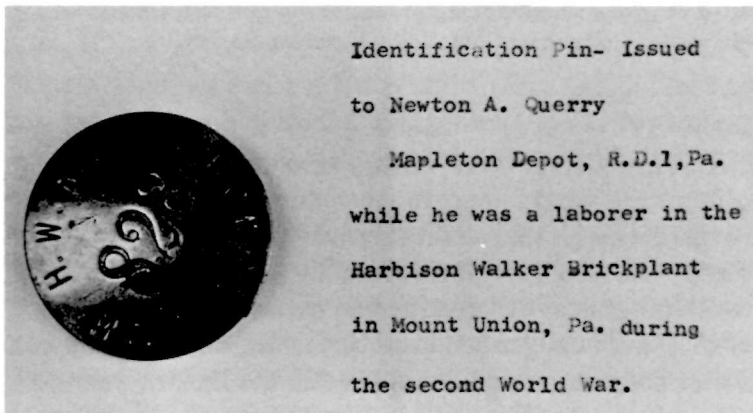


Fig. 4.25 Harbison-Walker employee identification pin. Collection of Mt. Union Historical Society.

close to a foul creek."¹⁴ Observers often made an unquestioned move from such negative aesthetic responses to an assumption that company town residents were "deprived," "low class citizens." The writers and government surveyors who were responsible for this unflattering popular image took their own middle-class tastes and life styles as the "American standard."¹⁵ Former and current company town residents are aware of the stereotype and are sometimes defensive about their experience. A mining town resident proclaimed that "life in a coal town was not always drab or gloomy, as some people may think." Another described the camaraderie of the coal patch towns and associated it with the side-by-side houses: "It was just one big family. All the houses were sort of close together. Everybody knew each other. If you had a problem, they had it." Residents of the refractories company towns made similar statements, expressing a common nostalgia for the close community of rural, small-town life.¹⁶

Brickyard town residents were in fact rather disinclined to see their towns and company houses as different from any others. Mrs. Paul Cox, now a resident of Kistler, once lived in one of the seven company houses next to General Refractories' Mt. Union brickyard. When asked to

¹⁴Cited in Crandall A. Shifflett, Coal Towns: Life, Work, and Culture in Company Towns of Southern Appalachia, 1880-1960 (Knoxville: University of Tennessee Press, 1991), 146.

¹⁵Shifflett, 152, 159.

¹⁶Shifflett, 146, 153. Steve Andrews, interview by author, Blandburg, Pa., June 13, 1991. Robert and Lula Ripple, interview by author, Salina, Pa., May 16, 1991.

describe it, she replied in a slightly exasperated tone that it was "just like a normal house."¹⁷ Residents treated company houses just like any other house before they held legal title, sometimes making substantial improvements at their own expense.¹⁸ Even when interior decoration was company-sponsored, residents were usually given a range of choices, and they made requests and demands when services seemed inadequate. In the early years at Kistler, for example, the company used "bright, deep" shades of green, blue, brown, and grey to paint the inside walls. When residents complained, a lighter palette of beiges and pastels was provided.¹⁹



Fig. 4.26 Brick wheelbarrow and mud shovel from Mt. Union brickyards. Collection of Mt. Union Historical Society.

According to the assumptions of outside observers who viewed company towns as dreary and regimented, the towns and their quality of life would improve when companies gave up ownership. Practical reality, however, often vies with the ideal of individual home-ownership as a source of self-respect and good citizenship. Despite the efforts of middle-class reformers and even of companies' housing and social work programs, different people treated the houses they lived in differently regardless of whether they were company houses or former company houses. Neighbors and residents of some refractories company towns did agree that the look of their towns improved. Just a few years after the house sales in Sproul, a reporter for the Altoona Mirror praised residents' do-it-yourself renovation efforts; "what homeowners have done with paint and hammer and wrought iron railings and outdoor patios and carports has been amazing." Private ownership, he wrote, brought out the "Yankee ingenuity" in these southern Pennsylvanians.²⁰

At other towns, however, residents believed that conditions and appearance declined when individuals were responsible for maintenance and improvement of their own property. Company maintenance had been vigilant and consistent whereas individual maintenance was sporadic and

¹⁷Mrs. Paul Cox, interview by author, Kistler, Pa., June 11, 1991.

¹⁸George and Betty Sucke, interview by author, Salina, Pa., June 26, 1991.

¹⁹Ressie Costlow, interview by Margaret Mulrooney, Kistler, Pa., March 30, 1989.

²⁰"Blend Yankee Ingenuity With Private Ownership," Altoona Mirror (July 22, 1970).



Fig. 4.27 Mt. Union Refractories "Norman Cottage"/Kenneth and Edna Cox residence, 96 Cedar St., Kistler. Photo by David Ames.

varied. One resident of Blandburg's "Yellow Row" said that under company ownership their neighborhood was "beautiful;" it was "perfect and neat" and looked like "a picture postcard."²¹ The houses were all painted, trees and shrubbery kept trimmed, walks and fences maintained, and families kept their yards neat and cultivated with flower and vegetable gardens. Forty years after Harbison-Walker turned over its property the streets were uneven and remaining sidewalks were deteriorating. Several houses were perfectly painted or sided, some had a combination of siding materials, others were vacant, and one had

broken windows and a missing door. (Fig. 4.18) The "decline" was due in part to the local economy--especially in Blandburg where the brickyard was closed just a few years after the houses were sold--but it also had to do with individual taste and standards of upkeep.

Company housing is a surprisingly complex and indistinct form. Yet some would argue that events during the 1903 strike in Blandburg surely provide its most telling definition--brickyard workers and their families could be evicted for joining a union or going out on strike. But even this fundamental point can be qualified. In one of the letters written to the Blandburg superintendent during the strike, Harbison-Walker General Manager O. M. Reif calculated the company had more power over those who owned their own property at Blandburg than over those renting houses. Immediately firing men who joined the union, Reif predicted, "will dishearten a large proportion of your men, especially those who have property at the Works, and to a certain extent also those who are living in our houses."²² He was apparently referring to property owners' increased dependence on the brickyard compared to the independence of renters who could move more easily to find other work. Recognition of the company's importance to the whole town was certainly clear when plants closed later in the century.

Residents did not always welcome the sale of company houses as an unqualified opportunity to own their own property and gain control over their own lives. In some places they suspected it as a signal that the company would pull out of the community and abandon all

²¹Laudelle Beers, interview by author, Blandburg, Pa., July 9, 1991. Thomas McGowan, interview by author, Blandburg, Pa., April 27, 1991. Shifflett, 150, quotes a coal town resident who described similar changes when company maintenance ended.

²²O. M. Reif to J. A. Boyd, September 18, 1902.

responsibility for it. They were left with houses, streets, and water systems that needed to be repaired and modernized. They were also left on their own to cope with work-related disabilities. In the early years of the brickyard towns companies usually made some provision for men who were injured on the job. Carl C. Muffley, whose right hand was amputated in a brick-cutting machine at Salina about 1918, was switched to office work and eventually became plant superintendent. Thousands of brickyarders suffered from silicosis caused by breathing brick dust, but by the time the disease was finally recognized in the late 1960s as the product of working conditions, companies had become bureaucratic entities located in distant cities. Each worker or a surviving family member had to go through a lengthy process of finding a doctor to certify their condition and a lawyer who would prosecute their "dust claim" against the company.²³

As the refractories plants closed, brickyarders made other claims on the industry. They commemorated their own role in its history and its importance for their communities. Even though the brickyards are gone, parts of them have been stored and recycled throughout the brickyard towns. On the last day of work at Claysburg, brick setter Jake Mentzer took the last brick from the kilns and carried it home with him. At Salina residents bake pizza on thin brick slabs, and at

both Salina and Bolivar miniature bricks engraved with plant anniversary dates were distributed among brickyard families.²⁴ Culled bricks had long been used for incidental building materials and to pave walkways in the towns. (Figs. 4.19-21) In Mt. Union in 1989 a committee collected bricks and some of the most elaborate shapes from the three brickyards and built a small monument to the "Brick Town" on a public sidewalk next to the post office. (Figs. 4.22-23)



Fig. 4.28 "Lost Time Accidents" record, Harbison-Walker brickyard ruins, Mt. Union, 1991. Photo by Kim Wallace.

²³Muffley interview. Ruth Defibaugh, interview by author, Sproul, Pa., September 25, 1991. William B. Fulton et al., *A Study of Silicosis in the Silica Brick Industry* (Harrisburg: Bureau of Industrial Hygiene, Department of Health, Commonwealth of Pennsylvania, 1941). David Rosner and Gerald Markowitz, *Deadly Dust: Silicosis and the Politics of Occupational Disease in Twentieth-Century America* (Princeton: Princeton University Press, 1991).

²⁴Kathy Mellott, "End of Era: Claysburg's Brick Plant Closes Its Doors," *Altoona Mirror* (July 31, 1987). Robert and Lula Ripple, interview by author, Salina, Pa., May 16, 1991. Leonard Stover, interview by author, Salina, Pa., June 29, 1991.

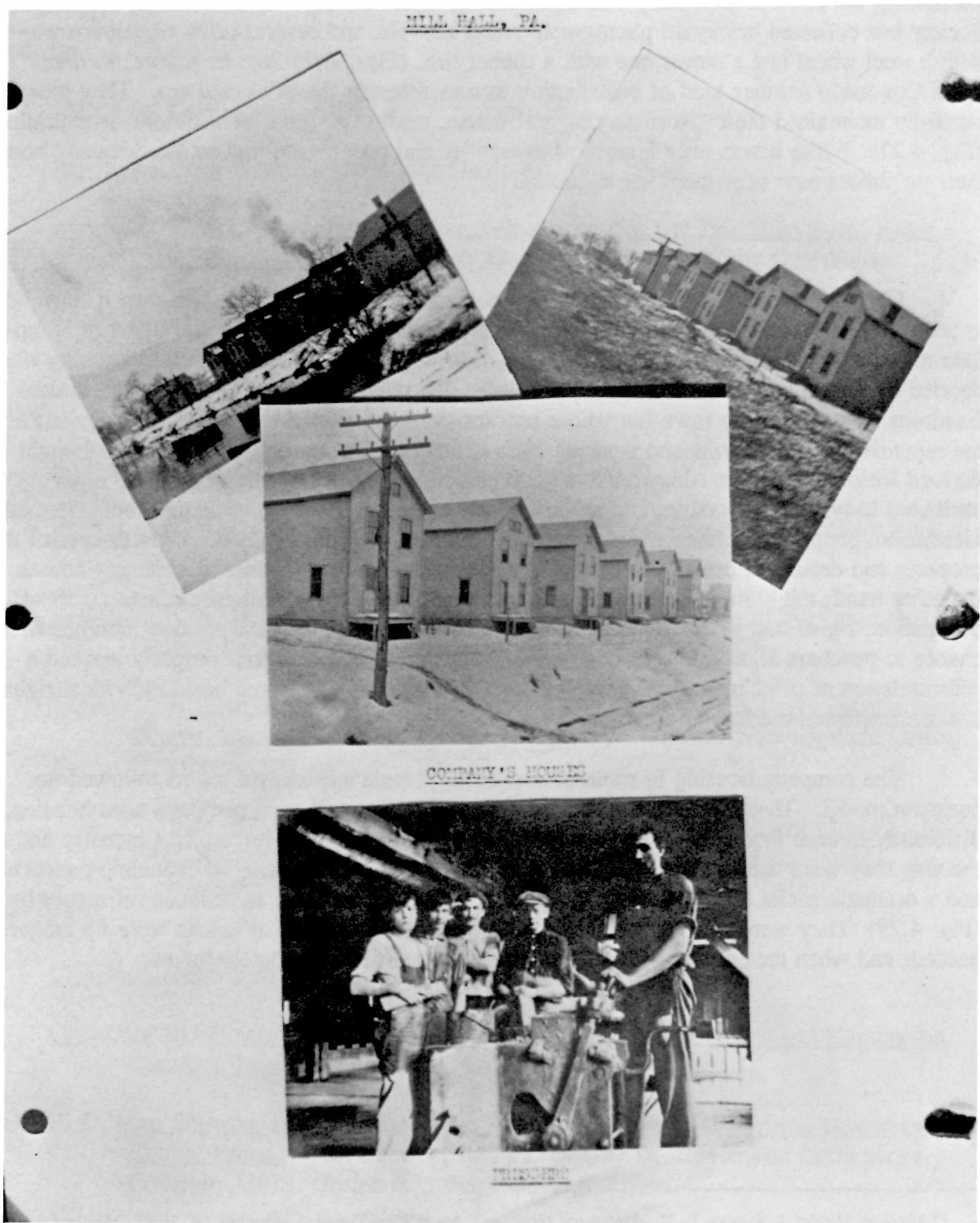


Fig. 4.29 Scrapbook page of photos of company houses and brick pressers, Mill Hall, Clinton County, undated. Collection of H-W Retirees Committee.

When the Blandburg brickyard was torn down, Steve Andrews rescued some bricks and a collection of hand tools including a push broom, pick, and mud shovel.²⁵ (Fig. 4.24)

Eschewing the usual local-history bias against such recent history, the Mt. Union Historical Society has collected brickyard photographs, mud shovels, and several brick wheelbarrows--one with a steel wheel and a newer one with a rubber tire. (Figs. 4.25-26) In Kistler, Kenneth and Edna Cox made another kind of contribution to remembering the brickyard era. They have carefully maintained their "Norman Cottage" house, making no exterior additions or alterations. (Fig. 4.27) While it was once a mark of prosperity and progress to update the company house, their neighbors now urge them not to change it.²⁶

* * *

Company housing is at once a more ambiguous and more loaded term than it first appears. Houses were not built simply to alleviate housing shortages but were part of an up-to-date management strategy of integrating the workforce with the plant. Company housing was decried by liberal reformers and critics who were dismayed by what they saw as the limited freedoms of the company town but whose perceptions were sometimes based on their distaste for the repetitive housing forms and working-class lifestyles. The management benefits thought to be derived from company housing--reliable good citizenship--are very similar to those often attributed to private ownership, and an analysis of company houses reveals their entanglement in ideas about property's influence and property rights. Companies claimed a right to control their property and defined it broadly as including residences. The inhabitants of company houses, on the other hand, might have lived in them for generations. They exercised de facto rights of occupation, rights that were obliquely recognized when companies gave resident families first chance to purchase legal title. The companies' divestment of residential property marked a reformulation of principles of efficient business operation. It conferred basic individual rights, but foreshadowed the loss of a community's livelihood.

The company housing in south-central Pennsylvania's brickyard towns followed no common model. There were different houses in each town, and each company used housing differently in each town. But viewed together in the context of the refractories industry and of the way they were used and lived in over time, these houses illuminate an economic restructuring and a dramatic social and cultural shift. Houses were built in order to produce refractory bricks. (Fig. 4.29) They were sold after brick making was mechanized, after bricks were no longer needed, and when the spheres of home and work seemed inappropriately linked.

²⁵"Mailbox Holder A Tribute To Bricktowners' Heritage," *Mt. Union Times* (September 14, 1990). Steve Andrews, interview by author, Blandburg, Pa., June 13, 1991.

²⁶Kenneth and Edna Cox, interview by author, Kistler, Pa., June 10, 1991.

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